| Α | | | | # Correct |
|----|------------------|----|-------------|-----------|
| | Add or subtract. | | | |
| 1 | 0 + 2 = | 23 | 2 + 4 = | |
| 2 | 2 + 2 = | 24 | 2 + 6 = | |
| 3 | 4 + 2 = | 25 | 2 + 8 = | |
| 4 | 6 + 2 = | 26 | 2 + 10 = | |
| 5 | 8 + 2 = | 27 | 2 + 12 = | |
| 6 | 10 + 2 = | 28 | 2 + 14 = | |
| 7 | 12 + 2 = | 29 | 2 + 16 = | |
| 8 | 14 + 2 = | 30 | 2 + 18 = | |
| 9 | 16 + 2 = | 31 | 0 + 22 = | |
| 10 | 18 + 2 = | 32 | 22 + 22 = | |
| 11 | 20 - 2 = | 33 | 44 + 22 = | |
| 12 | 18 - 2 = | 34 | 66 + 22 = | |
| 13 | 16 - 2 = | 35 | 88 - 22 = | |
| 14 | 14 - 2 = | 36 | 66 - 22 = | |
| 15 | 12 - 2 = | 37 | 44 - 22 = | |
| 16 | 10 - 2 = | 38 | 22 - 22 = | |
| 17 | 8 - 2 = | 39 | 22 + 0 = | |
| 18 | 6 - 2 = | 40 | 22 + 22 = | |
| 19 | 4 - 2 = | 41 | 22 + 44 = | |
| 20 | 2 - 2 = | 42 | 66 + 22 = | |
| 21 | 2 + 0 = | 43 | 888 - 222 = | |
| 22 | 2 + 2 = | 44 | 666 - 222 = | |





| В | Add or subtract. | Improvemer | nt | # Correct |
|----|------------------|------------|-------------|-----------|
| 1 | 2 + 0 = | 23 | 4 + 2 = | |
| 2 | 2 + 2 = | 24 | 6 + 2 = | |
| 3 | 2 + 4 = | 25 | 8 + 2 = | |
| 4 | 2 + 6 = | 26 | 10 + 2 = | |
| 5 | 2 + 8 = | 27 | 12 + 2 = | |
| 6 | 2 + 10 = | 28 | 14 + 2 = | |
| 7 | 2 + 12 = | 29 | 16 + 2 = | |
| 8 | 2 + 14 = | 30 | 18 + 2 = | |
| 9 | 2 + 16 = | 31 | 0 + 22 = | |
| 10 | 2 + 18 = | 32 | 22 + 22 = | |
| 11 | 20 - 2 = | 33 | 22 + 44 = | |
| 12 | 18 - 2 = | 34 | 66 + 22 = | |
| 13 | 16 - 2 = | 35 | 88 - 22 = | |
| 14 | 14 - 2 = | 36 | 66 - 22 = | |
| 15 | 12 - 2 = | 37 | 44 - 22 = | |
| 16 | 10 - 2 = | 38 | 22 - 22 = | |
| 17 | 8 - 2 = | 39 | 22 + 0 = | |
| 18 | 6 - 2 = | 40 | 22 + 22 = | |
| 19 | 4 - 2 = | 41 | 22 + 44 = | |
| 20 | 2 - 2 = | 42 | 66 + 22 = | |
| 21 | 0 + 2 = | 43 | 666 - 222 = | |
| 22 | 2 + 2 = | 44 | 888 - 222 = | |



Lesson 2: Relate multiplication to the array model.

| Α | Solve. | | # Corr | ect |
|----|---------------------|--------|-----------------|-----|
| 1 | 2 + 2 = | 23 | 7 + 7 = | |
| 2 | 2 twos = | 24 | 2 sevens = | |
| 3 | 5 + 5 = | 25 | 9 + 9 = | |
| 4 | 2 fives = | 26 | 2 nines = | |
| 5 | 2 + 2 + 2 = | 27 | 8 + 8 = | |
| 6 | 3 twos = | 28 | 2 eights = | |
| 7 | 2 + 2 + 2 + 2 = | 29 | 3 + 3 + 3 = | |
| 8 | 4 twos = | 30 | 3 threes = | |
| 9 | 5 + 5 + 5 = | 31 | 4 + 4 + 4 = | |
| 10 | 3 fives = | 32 | 3 fours = | |
| 11 | 5 + 5 + 5 + 5 = | 33 | 3 + 3 + 3 + 3 = | |
| 12 | 4 fives = | 34 | 4 threes = | |
| 13 | 2 fours = | 35 | 4 fives = | |
| 14 | 4 + 4 = | 36 | 5 + 5 + 5 + 5 = | |
| 15 | 2 threes = | 37 | 3 sixes = | |
| 16 | 3 + 3 = | 38 | 6 + 6 + 6 = | |
| 17 | 2 sixes = | 39 | 3 eights = | |
| 18 | 6 + 6 = | 40 | 8 + 8 + 8 = | |
| 19 | 5 twos = | 41 | 3 sevens = | |
| 20 | 2 + 2 + 2 + 2 + 2 = | 42 | 7 + 7 + 7 = | |
| 21 | 5 fives = | 43 | 3 nines = | |
| 22 | 5 + 5 + 5 + 5 + 5 = | 44 | 9 + 9 + 9 = | |



Lesson 3:

Interpret the meaning of factors—the size of the group or the number of groups.

5

| В | Solve. | Improvement | t # Corre | ect |
|----|---------------------|-------------|-----------------|-----|
| 1 | 5 + 5 = | 23 | 8 + 8 = | |
| 2 | 2 fives = | 24 | 2 eights = | |
| 3 | 2 + 2 = | 25 | 7 + 7 = | |
| 4 | 2 twos = | 26 | 2 sevens = | |
| 5 | 5 + 5 + 5 = | 27 | 9 + 9 = | |
| 6 | 3 fives = | 28 | 2 nines = | |
| 7 | 5 + 5 + 5 + 5 = | 29 | 3 + 3 + 3 + 3 = | |
| 8 | 4 fives = | 30 | 4 threes = | |
| 9 | 2 + 2 + 2 = | 31 | 4 + 4 + 4 = | |
| 10 | 3 twos = | 32 | 3 fours = | |
| 11 | 2 + 2 + 2 + 2 = | 33 | 3 + 3 + 3 = | |
| 12 | 4 twos = | 34 | 3 threes = | |
| 13 | 2 threes = | 35 | 4 fives = | |
| 14 | 3 + 3 = | 36 | 5 + 5 + 5 + 5 = | |
| 15 | 2 sixes = | 37 | 3 sevens = | |
| 16 | 6 + 6 = | 38 | 7 + 7 + 7 = | |
| 17 | 2 fours = | 39 | 3 nines = | |
| 18 | 4 + 4 = | 40 | 9 + 9 + 9 = | |
| 19 | 5 fives = | 41 | 3 sixes = | |
| 20 | 5 + 5 + 5 + 5 + 5 = | 42 | 6 + 6 + 6 = | |
| 21 | 5 twos = | 43 | 3 eights = | |
| 22 | 2 + 2 + 2 + 2 + 2 = | 44 | 8 + 8 + 8 = | |



Lesson 3:

Interpret the meaning of factors—the size of the group or the number of groups.

| Α | | | # Correct |
|----|---------------------|----|---------------------|
| | Add or multiply. | 00 | |
| 1 | 5 + 5 + 5 = | 23 | 3 + 3 + 3 + 3 = |
| 2 | 3 x 5 = | 24 | 4 x 3 = |
| 3 | 5 x 3 = | 25 | 3 x 4 = |
| 4 | 2 + 2 + 2 = | 26 | 3 + 3 + 3 = |
| 5 | 3 x 2 = | 27 | 3 x 3 = |
| 6 | 2 x 3 = | 28 | 3 + 3 + 3 + 3 + 3 = |
| 7 | 5 + 5 = | 29 | 5 x 3 = |
| 8 | 2 x 5 = | 30 | 3 x 5 = |
| 9 | 5 x 2 = | 31 | 7 + 7 = |
| 10 | 2 + 2 + 2 + 2 = | 32 | 2 x 7 = |
| 11 | 4 x 2 = | 33 | 7 x 2 = |
| 12 | 2 x 4 = | 34 | 9 + 9 = |
| 13 | 2 + 2 + 2 + 2 + 2 = | 35 | 2 x 9 = |
| 14 | 5 x 2 = | 36 | 9 x 2 = |
| 15 | 2 x 5 = | 37 | 6 + 6 = |
| 16 | 3 + 3 = | 38 | 6 x 2 = |
| 17 | 2 x 3 = | 39 | 2 x 6 = |
| 18 | 3 x 2 = | 40 | 8 + 8 = |
| 19 | 5 + 5 + 5 + 5 = | 41 | 2 x 8 = |
| 20 | 4 x 5 = | 42 | 8 x 2 = |
| 21 | 5 x 4 = | 43 | 7 + 7 + 7 + 7 = |
| 22 | 2 x 2 = | 44 | 4 x 7 = |



Lesson 4:

| В | Add or multiply. | emer | nt # Correct |
|----|---------------------|------|---------------------|
| 1 | 2 + 2 + 2 = | 23 | 4 + 4 + 4 = |
| 2 | 3 x 2 = | 24 | 3 x 4 = |
| 3 | 2 x 3 = | 25 | 4 x 3 = |
| 4 | 5 + 5 + 5 = | 26 | 4 + 4 + 4 + 4 = |
| 5 | 3 x 5 = | 27 | 4 × 4 = |
| 6 | 5 x 3 = | 28 | 4 + 4 + 4 + 4 + 4 = |
| 7 | 2 + 2 + 2 + 2 = | 29 | 4 x 5 = |
| 8 | 4 x 2 = | 30 | 5 x 4 = |
| 9 | 2 x 4 = | 31 | 6 + 6 = |
| 10 | 5 + 5 = | 32 | 6 x 2 = |
| 11 | 2 x 5 = | 33 | 2 x 6 = |
| 12 | 5 x 2 = | 34 | 8 + 8 = |
| 13 | 3 + 3 = | 35 | 2 x 8 = |
| 14 | 2 x 3 = | 36 | 8 x 2 = |
| 15 | 3 x 2 = | 37 | 7 + 7 = |
| 16 | 2 + 2 + 2 + 2 + 2 = | 38 | 2 x 7 = |
| 17 | 5 x 2 = | 39 | 7 x 2 = |
| 18 | 2 x 5 = | 40 | 9 + 9 = |
| 19 | 5 + 5 + 5 + 5 = | 41 | 2 x 9 = |
| 20 | 4 x 5 = | 42 | 9 x 2 = |
| 21 | 5 x 4 = | 43 | 6 + 6 + 6 + 6 = |
| 22 | 2 x 2 = | 44 | 4 x 6 = |



Lesson 9 Pattern Sheet 3•1

Multiply.

| 2 x 1 = | 2 x 2 = | 2 x 3 = | 2 x 4 = |
|---------|---------|---------|---------|
| 2 x 5 = | 2 x 1 = | 2 x 2 = | 2 x 1 = |
| 2 x 3 = | 2 x 1 = | 2 x 4 = | 2 x 1 = |
| 2 x 5 = | 2 x 1 = | 2 x 2 = | 2 x 3 = |
| 2 x 2 = | 2 x 4 = | 2 x 2 = | 2 x 5 = |
| 2 x 2 = | 2 x 1 = | 2 x 2 = | 2 x 3 = |
| 2 x 1 = | 2 x 3 = | 2 x 2 = | 2 x 3 = |
| 2 x 4 = | 2 x 3 = | 2 x 5 = | 2 x 3 = |
| 2 x 4 = | 2 x 1 = | 2 x 4 = | 2 x 2 = |
| 2 x 4 = | 2 x 3 = | 2 x 4 = | 2 x 5 = |
| 2 x 4 = | 2 x 5 = | 2 x 1 = | 2 x 5 = |
| 2 x 2 = | 2 x 5 = | 2 x 3 = | 2 x 5 = |
| 2 x 4 = | 2 x 2 = | 2 x 4 = | 2 x 3 = |
| 2 x 5 = | 2 x 3 = | 2 x 2 = | 2 x 4 = |
| 2 x 3 = | 2 x 5 = | 2 x 2 = | 2 x 4 = |

multiply by 2 (1-5)



Lesson 9:

Find related multiplication facts by adding and subtracting equal groups in array models

Multiply.

| 2 x 1 = | 2 x 2 = | 2 x 3 = | 2 x 4 = |
|---------|----------|---------|----------|
| 2 x 5 = | 2 x 6 = | 2 x 7 = | 2 x 8 = |
| 2 x 9 = | 2 x 10 = | 2 x 5 = | 2 x 6 = |
| 2 x 5 = | 2 x 7 = | 2 x 5 = | 2 x 8 = |
| 2 x 5 = | 2 x 9 = | 2 x 5 = | 2 x 10 = |
| 2 x 6 = | 2 x 5 = | 2 x 6 = | 2 x 7 = |
| 2 x 6 = | 2 x 8 = | 2 x 6 = | 2 x 9 = |
| 2 x 6 = | 2 x 7 = | 2 x 6 = | 2 x 7 = |
| 2 x 8 = | 2 x 7 = | 2 x 9 = | 2 x 7 = |
| 2 x 8 = | 2 x 6 = | 2 x 8 = | 2 x 7 = |
| 2 x 8 = | 2 x 9 = | 2 x 9 = | 2 x 6 = |
| 2 x 9 = | 2 x 7 = | 2 x 9 = | 2 x 8 = |
| 2 x 9 = | 2 x 8 = | 2 x 6 = | 2 x 9 = |
| 2 x 7 = | 2 x 9 = | 2 x 6 = | 2 x 8 = |
| 2 x 9 = | 2 x 7 = | 2 x 6 = | 2 x 8 = |

multiply by 2 (6-10)



Lesson 10:

Model the distributive property with arrays to decompose units as a strategy to multiply.

Multiply.

| 3 x 1 = | 3 x 2 = | 3 x 3 = | 3 x 4 = |
|---------|---------|---------|---------|
| 3 x 5 = | 3 x 1 = | 3 x 2 = | 3 x 1 = |
| 3 x 3 = | 3 x 1 = | 3 x 4 = | 3 x 1 = |
| 3 x 5 = | 3 x 1 = | 3 x 2 = | 3 x 3 = |
| 3 x 2 = | 3 x 4 = | 3 x 2 = | 3 x 5 = |
| 3 x 2 = | 3 x 1 = | 3 x 2 = | 3 x 3 = |
| 3 x 1 = | 3 x 3 = | 3 x 2 = | 3 x 3 = |
| 3 x 4 = | 3 x 3 = | 3 x 5 = | 3 x 3 = |
| 3 x 4 = | 3 x 1 = | 3 x 4 = | 3 x 2 = |
| 3 x 4 = | 3 x 3 = | 3 x 4 = | 3 x 5 = |
| 3 x 4 = | 3 x 5 = | 3 x 1 = | 3 x 5 = |
| 3 x 2 = | 3 x 5 = | 3 x 3 = | 3 x 5 = |
| 3 x 4 = | 3 x 2 = | 3 x 4 = | 3 x 3 = |
| 3 x 5 = | 3 x 3 = | 3 x 2 = | 3 x 4 = |
| 3 x 3 = | 3 x 5 = | 3 x 2 = | 3 x 4 = |

multiply by 3 (1–5)



Lesson 11:

Model division as the unknown factor in multiplication using arrays and tape diagrams.

| | Multi | ply. | | | | | | | | | | | | | | |
|---------|---------------|-----------|----------|-------|---|----|---|-------|---|---|---|-------|---|----|---|--|
| | 3 x | 1 | = | 3 | х | 2 | = | 3 | х | 3 | = | 3 | х | 4 | = | |
| | 3 x | 5 | = | 3 | х | 6 | = | 3 | х | 7 | = | 3 | х | 8 | = | |
| | 3 x | 9 | = | 3 | х | 10 | = | 3 | х | 5 | = | 3 | х | 6 | = | |
| | 3 x | 5 | = | 3 | х | 7 | = | 3 | х | 5 | = | 3 | х | 8 | = | |
| | 3 x | 5 | = | 3 | х | 9 | = | 3 | х | 5 | = | 3 | х | 10 | = | |
| | 3 x | 6 | = | 3 | х | 5 | = | 3 | х | 6 | = | 3 | х | 7 | = | |
| | 3 x | 6 | = | 3 | х | 8 | = | 3 | х | 6 | = | 3 | х | 9 | = | |
| | 3 x | 6 | = | 3 | х | 7 | = | 3 | x | 6 | = | 3 | х | 7 | = | |
| | 3 x | 8 | = | 3 | x | 7 | = | 3 | x | 9 | = | 3 | х | 7 | = | |
| | 3 x | 8 | = | 3 | х | 6 | = | 3 | х | 8 | = | 3 | х | 7 | = | |
| | 3 x | 8 | = | 3 | х | 9 | = | 3 | х | 9 | = | 3 | х | 6 | = | |
| | 3 x | 9 | = | 3 | х | 7 | = | 3 | х | 9 | = | 3 | х | 8 | = | |
| | 3 x | 9 | = | 3 | х | 8 | = | 3 | х | 6 | = | 3 | х | 9 | = | |
| | 3 x | 7 | = | 3 | х | 9 | = | 3 | х | 6 | = | 3 | х | 8 | = | |
| multipl | 3 x y by 3 | 9 (6–2 | = 10) | 3 | х | 7 | = | 3 | х | 6 | = | 3 | х | 8 | = | |
| | | | | | | | | | | | | | | | | |



Lesson 12:

Interpret the quotient as the number of groups or the number of objects in each group using units of 2.

| Α | Solve. | | | # Correct |
|----|----------|----|----------|-----------|
| 1 | 2 x 2 = | 23 | x 2 = 20 | |
| 2 | 3 x 2 = | 24 | x 2 = 4 | |
| 3 | 4 x 2 = | 25 | x 2 = 6 | |
| 4 | 5 x 2 = | 26 | 20 ÷ 2 = | |
| 5 | 1 x 2 = | 27 | 10 ÷ 2 = | |
| 6 | 4 ÷ 2 = | 28 | 2 ÷ 1 = | |
| 7 | 6 ÷ 2 = | 29 | 4 ÷ 2 = | |
| 8 | 10 ÷ 2 = | 30 | 6 ÷ 2 = | |
| 9 | 2 ÷ 1 = | 31 | x 2 = 12 | |
| 10 | 8 ÷ 2 = | 32 | x 2 = 14 | |
| 11 | 6 x 2 = | 33 | x 2 = 18 | |
| 12 | 7 x 2 = | 34 | x 2 = 16 | |
| 13 | 8 x 2 = | 35 | 14 ÷ 2 = | |
| 14 | 9 x 2 = | 36 | 18 ÷ 2 = | |
| 15 | 10 x 2 = | 37 | 12 ÷ 2 = | |
| 16 | 16 ÷ 2 = | 38 | 16 ÷ 2 = | |
| 17 | 14 ÷ 2 = | 39 | 11 x 2 = | |
| 18 | 18 ÷ 2 = | 40 | 22 ÷ 2 = | |
| 19 | 12 ÷ 2 = | 41 | 12 x 2 = | |
| 20 | 20 ÷ 2 = | 42 | 24 ÷ 2 = | |
| 21 | x 2 = 10 | 43 | 14 x 2 = | |
| 22 | x 2 = 12 | 44 | 28 ÷ 2 = | |



Lesson 13:

Interpret the quotient as the number of groups or the number of objects in each group using units of 3.

| В | Salva | Improvemer | nt | # Correct |
|----|----------|------------|----------|-----------|
| 1 | 1 x 2 = | 23 | x 2 = 4 | |
| 2 | 2 x 2 = | 24 | x 2 = 20 | |
| 3 | 3 x 2 = | 25 | x 2 = 6 | |
| 4 | 4 x 2 = | 26 | 4 ÷ 2 = | |
| 5 | 5 x 2 = | 27 | 2 ÷ 1 = | |
| 6 | 6 ÷ 2 = | 28 | 20 ÷ 2 = | |
| 7 | 4 ÷ 2 = | 29 | 10 ÷ 2 = | |
| 8 | 8 ÷ 2 = | 30 | 6 ÷ 2 = | |
| 9 | 2 ÷ 1 = | 31 | x 2 = 12 | |
| 10 | 10 ÷ 2 = | 32 | x 2 = 16 | |
| 11 | 10 x 2 = | 33 | x 2 = 18 | |
| 12 | 6 x 2 = | 34 | x 2 = 14 | |
| 13 | 7 x 2 = | 35 | 16 ÷ 2 = | |
| 14 | 8 x 2 = | 36 | 18 ÷ 2 = | |
| 15 | 9 x 2 = | 37 | 12 ÷ 2 = | |
| 16 | 14 ÷ 2 = | 38 | 14 ÷ 2 = | |
| 17 | 12 ÷ 2 = | 39 | 11 x 2 = | |
| 18 | 16 ÷ 2 = | 40 | 22 ÷ 2 = | |
| 19 | 20 ÷ 2 = | 41 | 12 x 2 = | |
| 20 | 18 ÷ 2 = | 42 | 24 ÷ 2 = | |
| 21 | x 2 = 12 | 43 | 13 x 2 = | |
| 22 | x 2 = 10 | 44 | 26 ÷ 2 = | |



Lesson 13:

Interpret the quotient as the number of groups or the number of objects in each group using units of 3.

| Α | Solve. | | | # Correct |
|----|----------|----|----------|-----------|
| 1 | 2 x 3 = | 23 | x 3 = 30 | |
| 2 | 3 x 3 = | 24 | x 3 = 6 | |
| 3 | 4 x 3 = | 25 | x 3 = 9 | |
| 4 | 5 x 3 = | 26 | 30 ÷ 3 = | |
| 5 | 1 x 3 = | 27 | 15 ÷ 3 = | |
| 6 | 6 ÷ 3 = | 28 | 3 ÷ 1 = | |
| 7 | 9 ÷ 3 = | 29 | 6 ÷ 3 = | |
| 8 | 15 ÷ 3 = | 30 | 9 ÷ 3 = | |
| 9 | 3 ÷ 1 = | 31 | x 3 = 18 | |
| 10 | 12 ÷ 3 = | 32 | x 3 = 21 | |
| 11 | 6 x 3 = | 33 | x 3 = 27 | |
| 12 | 7 x 3 = | 34 | x 3 = 24 | |
| 13 | 8 x 3 = | 35 | 21 ÷ 3 = | |
| 14 | 9 x 3 = | 36 | 27 ÷ 3 = | |
| 15 | 10 x 3 = | 37 | 18 ÷ 3 = | |
| 16 | 24 ÷ 3 = | 38 | 24 ÷ 3 = | |
| 17 | 21 ÷ 3 = | 39 | 11 x 3 = | |
| 18 | 27 ÷ 3 = | 40 | 33 ÷ 3 = | |
| 19 | 18 ÷ 3 = | 41 | 12 x 3 = | |
| 20 | 30 ÷ 3 = | 42 | 36 ÷ 3 = | |
| 21 | x 3 = 15 | 43 | 13 x 3 = | |
| 22 | x 3 =12 | 44 | 39 ÷ 3 = | |



Lesson 14:

Skip-count objects in models to build fluency with multiplication facts using units of 4

| В | Solve. | Improvemer | nt | # Correct |
|----|----------|------------|----------|-----------|
| 1 | 1 x 3 = | 23 | x 3 = 6 | |
| 2 | 2 x 3 = | 24 | x 3 = 30 | |
| 3 | 3 x 3 = | 25 | x 3 = 9 | |
| 4 | 4 x 3 = | 26 | 6 ÷ 3 = | |
| 5 | 5 x 3 = | 27 | 3 ÷ 1 = | |
| 6 | 9 ÷ 3 = | 28 | 30 ÷ 3 = | |
| 7 | 6 ÷ 3 = | 29 | 15 ÷ 3 = | |
| 8 | 12 ÷ 3 = | 30 | 9 ÷ 3 = | |
| 9 | 3 ÷ 1 = | 31 | x 3 = 18 | |
| 10 | 15 ÷ 3 = | 32 | x 3 = 24 | |
| 11 | 10 x 3 = | 33 | x 3 = 27 | |
| 12 | 6 x 3 = | 34 | x 3 = 21 | |
| 13 | 7 x 3 = | 35 | 24 ÷ 3 = | |
| 14 | 8 x 3 = | 36 | 27 ÷ 3 = | |
| 15 | 9 x 3 = | 37 | 18 ÷ 3 = | |
| 16 | 21 ÷ 3 = | 38 | 21 ÷ 3 = | |
| 17 | 18 ÷ 3 = | 39 | 11 x 3 = | |
| 18 | 24 ÷ 3 = | 40 | 33 ÷ 3 = | |
| 19 | 30 ÷ 3 = | 41 | 12 x 3 = | |
| 20 | 27 ÷ 3 = | 42 | 36 ÷ 3 = | |
| 21 | x 3 = 12 | 43 | 13 x 3 = | |
| 22 | x 3 =15 | 44 | 39 ÷ 3 = | |



Lesson 14:

Skip-count objects in models to build fluency with multiplication facts using units of 4

A STORY OF UNITS

| Mι | Itip | oly. | | | | | | | | | | | | | |
|----|------|------|---|-------|---|---|---|-------|---|---|---|-------|---|---|---|
| 4 | х | 1 | = | 4 | х | 2 | = | 4 | х | 3 | = | 4 | х | 4 | = |
| 4 | x | 5 | = | 4 | х | 1 | = | 4 | х | 2 | = | 4 | х | 1 | = |
| 4 | х | 3 | = | 4 | x | 1 | = | 4 | х | 4 | = | 4 | х | 1 | = |
| 4 | х | 5 | = | 4 | х | 1 | = | 4 | х | 2 | = | 4 | x | 3 | = |
| 4 | x | 2 | = | 4 | x | 4 | = | 4 | x | 2 | = | 4 | х | 5 | = |
| 4 | x | 2 | = | 4 | x | 1 | = | 4 | x | 2 | = | 4 | x | 3 | = |
| 4 | x | 1 | = | 4 | x | 3 | = | 4 | x | 2 | = | 4 | x | 3 | = |
| 4 | х | 4 | = | 4 | х | 3 | = | 4 | х | 5 | = | 4 | х | 3 | = |
| 4 | x | 4 | = | 4 | x | 1 | = | 4 | x | 4 | = | 4 | х | 2 | = |
| 4 | х | 4 | = | 4 | х | 3 | = | 4 | х | 4 | = | 4 | х | 5 | = |
| 4 | х | 4 | = | 4 | x | 5 | = | 4 | х | 1 | = | 4 | х | 5 | = |
| 4 | x | 2 | = | 4 | x | 5 | = | 4 | x | 3 | = | 4 | x | 5 | = |
| 4 | x | 4 | = | 4 | x | 2 | = | 4 | x | 4 | = | 4 | x | 3 | = |
| 4 | х | 5 | = | 4 | х | 3 | = | 4 | х | 2 | = | 4 | x | 4 | = |
| 4 | x | 3 | = | 4 | x | 5 | = | 4 | x | 2 | = | 4 | x | 4 | = |

multiply by 4 (1-5)



Lesson 15:

Relate arrays to tape diagrams to model the commutative property of multiplication.

| Multiply. | | | |
|-----------|----------|----------|----------|
| 4 x 1 = | 4 x 2 = | 4 x 3 = | 4 x 4 = |
| 4 x 5 = | 4 x 6 = | 4 x 7 = | 4 x 8 = |
| 4 x 9 = | 4 x 10 = | 4 x 6 = | 4 x 7 = |
| 4 x 6 = | 4 x 8 = | 4 x 6 = | 4 x 9 = |
| 4 x 6 = | 4 x 10 = | 4 x 6 = | 4 x 7 = |
| 4 x 6 = | 4 x 7 = | 4 x 8 = | 4 x 7 = |
| 4 x 9 = | 4 x 7 = | 4 x 10 = | 4 x 7 = |
| 4 x 8 = | 4 x 6 = | 4 x 8 = | 4 x 7 = |
| 4 x 8 = | 4 x 9 = | 4 x 8 = | 4 x 10 = |
| 4 x 8 = | 4 x 9 = | 4 x 6 = | 4 x 9 = |
| 4 x 7 = | 4 x 9 = | 4 x 8 = | 4 x 9 = |
| 4 x 10 = | 4 x 9 = | 4 x 10 = | 4 x 6 = |
| 4 x 10 = | 4 x 7 = | 4 x 10 = | 4 x 8 = |
| 4 x 10 = | 4 x 9 = | 4 x 10 = | 4 x 6 = |
| 4 x 8 = | 4 x 10 = | 4 x 7 = | 4 x 9 = |

multiply by 4 (6–10)



Use the distributive property as a strategy find related multiplication

facts.

.

..

| Α | Multiply or divide | | | # Correct |
|----|--------------------|----|----------|-----------|
| 1 | 2 x 4 = | 23 | x 4 = 40 | |
| 2 | 3 x 4 = | 24 | x 4 = 8 | |
| 3 | 4 x 4 = | 25 | x 4 = 12 | |
| 4 | 5 x 4 = | 26 | 40 ÷ 4 = | |
| 5 | 1 x 4 = | 27 | 20 ÷ 4 = | |
| 6 | 8 ÷ 4 = | 28 | 4 ÷ 1 = | |
| 7 | 12 ÷ 4 = | 29 | 8 ÷ 4 = | |
| 8 | 20 ÷ 4 = | 30 | 12 ÷ 4 = | |
| 9 | 4 ÷ 1 = | 31 | x 4 = 16 | |
| 10 | 16 ÷ 4 = | 32 | x 4 = 28 | |
| 11 | 6 x 4 = | 33 | x 4 = 36 | |
| 12 | 7 x 4 = | 34 | x 4 = 32 | |
| 13 | 8 x 4 = | 35 | 28 ÷ 4 = | |
| 14 | 9 x 4 = | 36 | 36 ÷ 4 = | |
| 15 | 10 x 4 = | 37 | 24 ÷ 4 = | |
| 16 | 32 ÷ 4 = | 38 | 32 ÷ 4 = | |
| 17 | 28 ÷ 4 = | 39 | 11 x 4 = | |
| 18 | 36 ÷ 4 = | 40 | 44 ÷ 4 = | |
| 19 | 24 ÷ 4 = | 41 | 12 ÷ 4 = | |
| 20 | 40 ÷ 4 = | 42 | 48 ÷ 4 = | |
| 21 | x 4 = 20 | 43 | 14 x 4 = | |
| 22 | x 4 = 24 | 44 | 56 ÷ 4 = | |



Model the relationship between multiplication and division. Lesson 17:

| В | Multply or divide. | Improvemer | nt | # Correct | | | | |
|----|--------------------|------------|----------|-----------|--|--|--|--|
| 1 | 1 x 4 = | 23 | x 4 = 8 | | | | | |
| 2 | 2 x 4 = | 24 | x 4 = 40 | | | | | |
| 3 | 3 x 4 = | 25 | x 4 = 12 | | | | | |
| 4 | 4 x 4 = | 26 | 8 ÷ 4 = | | | | | |
| 5 | 5 x 4 = | 27 | 4 ÷ 1 = | | | | | |
| 6 | 12 ÷ 4 = | 28 | 40 ÷ 4 = | | | | | |
| 7 | 8 ÷ 4 = | 29 | 20 ÷ 4 = | | | | | |
| 8 | 16 ÷ 4 = | 30 | 12 ÷ 4 = | | | | | |
| 9 | 4 ÷ 1 = | 31 | x 4 = 12 | | | | | |
| 10 | 20 ÷ 4 = | 32 | x 4 = 24 | | | | | |
| 11 | 10 x 4 = | 33 | x 4 = 36 | | | | | |
| 12 | 6 x 4 = | 34 | x 4 = 28 | | | | | |
| 13 | 7 x 4 = | 35 | 32 ÷ 4 = | | | | | |
| 14 | 8 x 4 = | 36 | 36 ÷ 4 = | | | | | |
| 15 | 9 x 4 = | 37 | 24 ÷ 4 = | | | | | |
| 16 | 28 ÷ 4 = | 38 | 28 ÷ 4 = | | | | | |
| 17 | 24 ÷ 4 = | 39 | 11 x 4 = | | | | | |
| 18 | 32 ÷ 4 = | 40 | 44 ÷ 4 = | | | | | |
| 19 | 40 ÷ 4 = | 41 | 12 x 4 = | | | | | |
| 20 | 36 ÷ 4 = | 42 | 48 ÷ 4 = | | | | | |
| 21 | x 4 = 16 | 43 | 13 x 4 = | | | | | |
| 22 | x 4 = 20 | 44 | 52 ÷ 4 = | | | | | |



Lesson 17: Model the relationship between multiplication and division.

| Α | Add or subtract | | | ; | # Correct |
|----|-----------------|---|----|------------|-----------|
| 1 | 0 + 5 = | 2 | 23 | 10 + 5 = | |
| 2 | 5 + 5 = | 2 | 24 | 15 + 5 = | |
| 3 | 10 + 5 = | 2 | 25 | 20 + 5 = | |
| 4 | 15 + 5 = | 2 | 26 | 25 + 5 = | |
| 5 | 20 + 5 = | 2 | 27 | 30 + 5 = | |
| 6 | 25 + 5 = | 2 | 28 | 35 + 5 = | |
| 7 | 30 + 5 = | 2 | 29 | 40 + 5 = | |
| 8 | 35 + 5 = | 3 | 30 | 45 + 5 = | |
| 9 | 40 + 5 = | 3 | 31 | 0 + 50 = | |
| 10 | 45 + 5 = | 3 | 32 | 50 + 50 = | |
| 11 | 50 - 5 = | 3 | 33 | 50 + 5 = | |
| 12 | 45 - 5 = | 3 | 34 | 55 + 5 = | |
| 13 | 40 - 5 = | 3 | 35 | 60 - 5 = | |
| 14 | 35 - 5 = | 3 | 36 | 55 - 5 = | |
| 15 | 30 - 5 = | 3 | 37 | 60 + 5 = | |
| 16 | 25 - 5 = | 3 | 38 | 65 + 5 = | |
| 17 | 20 - 5 = | 3 | 39 | 70 - 5 = | |
| 18 | 15 - 5 = | 4 | 10 | 65 - 5 = | |
| 19 | 10 - 5 = | 4 | 11 | 100 + 50 = | |
| 20 | 5 - 5 = | 4 | 12 | 150 + 50 = | |
| 21 | 5 + 0 = | 4 | 13 | 200 - 50 = | |
| 22 | 5 + 5 = | 4 | 14 | 150 - 50 = | |



Lesson 18: Apply the distributive property to decompose units.

| В | Add or subtract. | Improvemen | # Correct | |
|----|------------------|------------|------------|--|
| 1 | 5 + 0 = | 23 | 10 + 5 = | |
| 2 | 5 + 5 = | 24 | 15 + 5 = | |
| 3 | 5 + 10 = | 25 | 20 + 5 = | |
| 4 | 5 + 15 = | 26 | 25 + 5 = | |
| 5 | 5 + 20 = | 27 | 30 + 5 = | |
| 6 | 5 + 25 = | 28 | 35 + 5 = | |
| 7 | 5 + 30 = | 29 | 40 + 5 = | |
| 8 | 5 + 35 = | 30 | 45 + 5 = | |
| 9 | 5 + 40 = | 31 | 50 + 0 | |
| 10 | 5 + 45 = | 32 | 50 + 50 = | |
| 11 | 50 - 5 = | 33 | 5 + 50 = | |
| 12 | 45 - 5 = | 34 | 5 + 55 = | |
| 13 | 40 - 5 = | 35 | 60 - 5 = | |
| 14 | 35 - 5 = | 36 | 55 - 5 = | |
| 15 | 30 - 5 = | 37 | 5 + 60 = | |
| 16 | 25 - 5 = | 38 | 5 + 65 = | |
| 17 | 20 - 5 = | 39 | 70 - 5 = | |
| 18 | 15 - 5 = | 40 | 65 - 5 = | |
| 19 | 10 - 5 = | 41 | 50 + 100 = | |
| 20 | 5 - 5 = | 42 | 50 + 150 = | |
| 21 | 0 + 5 = | 43 | 200 - 50 = | |
| 22 | 5 + 5 = | 44 | 150 - 50 = | |



Lesson 18: Apply the distributive property to decompose units.

| Α | | | | | # Correct |
|----|--------------------|----|---|----------|-----------|
| | Fill-in the blank. | | | | |
| 1 | 0, 5, | 2 | 3 | 35,, 45 | |
| 2 | 5, 10, | 24 | 4 | 15,, 25 | |
| 3 | 10, 15, | 2 | 5 | 40,, 50 | |
| 4 | 15, 20, | 2 | 6 | 25,, 15 | |
| 5 | 20, 25, | 2 | 7 | 50,, 40 | |
| 6 | 25, 30, | 2 | 8 | 20,, 10 | |
| 7 | 30, 35, | 2 | 9 | 45,, 35 | |
| 8 | 35, 40, | 3 | 0 | 15,, 5 | |
| 9 | 40, 45, | 3 | 1 | 40,, 30 | |
| 10 | 50, 45, | 3 | 2 | 10,, 0 | |
| 11 | 45, 40, | 3 | 3 | 35,, 25 | |
| 12 | 40, 35, | 3. | 4 | , 10, 5 | |
| 13 | 35, 30, | 3 | 5 | , 35, 30 | |
| 14 | 30, 25, | 3 | 6 | , 15, 10 | |
| 15 | 25, 20, | 3 | 7 | , 40, 35 | |
| 16 | 20, 15, | 3 | 8 | , 20, 15 | |
| 17 | 15, 10, | 3 | 9 | , 45, 40 | |
| 18 | 0,, 10 | 4 | 0 | 50, 55, | |
| 19 | 25,, 35 | 4 | 1 | 45, 50, | |
| 20 | 5,, 15 | 4 | 2 | 65,, 55 | |
| 21 | 30,, 40 | 4 | 3 | 55, 60, | |
| 22 | 10,, 20 | 4 | 4 | 60, 65, | |



Lesson 20:

Solve two-step word problems involving multiplication and division, and assess the reasonableness of answers

| В | Fill-in the blank. | Improvemer | nt | # Correct |
|----|--------------------|------------|----------|-----------|
| 1 | 5, 10, | 23 | 15,, 25 | |
| 2 | 10, 15, | 24 | 35,, 45 | |
| 3 | 15, 20, | 25 | 30,, 20 | |
| 4 | 20, 25, | 26 | 25,, 15 | |
| 5 | 25, 30, | 27 | 50,, 40 | |
| 6 | 30, 35, | 28 | 20,, 10 | |
| 7 | 35, 40, | 29 | 45,, 35 | |
| 8 | 40, 45, | 30 | 15,, 5 | |
| 9 | 50, 45, | 31 | 35,, 25 | |
| 10 | 45, 40, | 32 | 10,, 0 | |
| 11 | 40, 35, | 33 | 35,, 25 | |
| 12 | 35, 30, | 34 | , 15, 10 | |
| 13 | 30, 25, | 35 | , 40, 35 | |
| 14 | 25, 20, | 36 | , 20, 15 | |
| 15 | 20, 15, | 37 | , 45, 40 | |
| 16 | 15, 10, | 38 | , 10, 5 | |
| 17 | 0,, 10 | 39 | , 35, 30 | |
| 18 | 25,, 35 | 40 | 45, 50, | |
| 19 | 5,, 15 | 41 | 50, 55, | |
| 20 | 30,, 40 | 42 | 55, 60, | |
| 21 | 10,, 20 | 43 | 65,, 55 | |
| 22 | 35,, 45 | 44 | , 60, 55 | |



Lesson 20:

Solve two-step word problems involving multiplication and division, and assess the reasonableness of answers

| Μι | ultip | oly. | | | | | | | | | | | | | | |
|----|-------|------|---|-------|---|---|---|-------|---|---|---|-------|---|---|-----|--|
| 5 | х | 1 | = | 5 | х | 2 | = | 5 | х | 3 | = | 5 | х | 4 | = _ | |
| 5 | х | 5 | = | 5 | х | 1 | = | 5 | х | 2 | = | 5 | х | 1 | = _ | |
| 5 | х | 3 | = | 5 | х | 1 | = | 5 | х | 4 | = | 5 | х | 1 | = _ | |
| 5 | х | 5 | = | 5 | х | 1 | = | 5 | х | 2 | = | 5 | х | 3 | = _ | |
| 5 | x | 2 | = | 5 | х | 4 | = | 5 | х | 2 | = | 5 | x | 5 | = _ | |
| 5 | х | 2 | = | 5 | х | 1 | = | 5 | х | 2 | = | 5 | х | 3 | = _ | |
| 5 | х | 1 | = | 5 | х | 3 | = | 5 | х | 2 | = | 5 | х | 3 | = _ | |
| 5 | x | 4 | = | 5 | х | 3 | = | 5 | х | 5 | = | 5 | х | 3 | = _ | |
| 5 | х | 4 | = | 5 | х | 1 | = | 5 | х | 4 | = | 5 | х | 2 | = _ | |
| 5 | х | 4 | = | 5 | х | 3 | = | 5 | х | 4 | = | 5 | х | 5 | = _ | |
| 5 | x | 4 | = | 5 | x | 5 | = | 5 | х | 1 | = | 5 | x | 5 | = _ | |
| 5 | х | 2 | = | 5 | х | 5 | = | 5 | х | 3 | = | 5 | x | 5 | = _ | |
| 5 | x | 4 | = | 5 | х | 2 | = | 5 | х | 4 | = | 5 | x | 3 | = _ | |
| 5 | х | 5 | = | 5 | х | 3 | = | 5 | х | 2 | = | 5 | х | 4 | = _ | |
| 5 | х | 3 | = | 5 | х | 5 | = | 5 | х | 2 | = | 5 | x | 4 | = _ | |

Lesson 21 Pattern Sheet 3•1

multiply by 5 (1–5)

A STORY OF UNITS



Lesson 21:

Solve two-step word problems involving all four operations, and assess the reasonableness of answers

| Α | | | | | # Correct |
|-------|------------|--------------------------------|--------|-------|-----------|
| Write | the number | that is halfway between the tw | o numl | oers. | |
| 1 | 0 | 10 | 23 | 280 | 290 |
| 2 | 10 | 20 | 24 | 580 | 590 |
| 3 | 20 | 30 | 25 | 590 | 580 |
| 4 | 70 | 80 | 26 | 30 | 40 |
| 5 | 80 | 70 | 27 | 930 | 940 |
| 6 | 40 | 50 | 28 | 70 | 60 |
| 7 | 50 | 40 | 29 | 470 | 460 |
| 8 | 30 | 40 | 30 | 90 | 100 |
| 9 | 40 | 30 | 31 | 890 | 900 |
| 10 | 70 | 60 | 32 | 990 | 1000 |
| 11 | 60 | 70 | 33 | 1000 | 1010 |
| 12 | 80 | 90 | 34 | 70 | 80 |
| 13 | 90 | 100 | 35 | 1070 | 1080 |
| 14 | 100 | 90 | 36 | 1570 | 1580 |
| 15 | 90 | 80 | 37 | 480 | 490 |
| 16 | 50 | 60 | 38 | 1480 | 1490 |
| 17 | 150 | 160 | 39 | 1080 | 1090 |
| 18 | 250 | 260 | 40 | 360 | 350 |
| 19 | 750 | 760 | 41 | 1790 | 1780 |
| 20 | 760 | 750 | 42 | 400 | 390 |
| 21 | 80 | 90 | 43 | 1840 | 1830 |
| 22 | 180 | 190 | 44 | 1110 | 1100 |



Lesson 14: Round to the nearest hundred on the vertical number line.

| В | | Improveme | nt | # Correct | | | |
|-------|--------------|------------------------------------|-------|-----------|------|--|--|
| Write | the number t | hat is halfway between the two num | bers. | | | | |
| 1 | 10 | 20 | 23 | 270 | 280 | | |
| 2 | 20 | 30 | 24 | 670 | 680 | | |
| 3 | 30 | 40 | 25 | 680 | 670 | | |
| 4 | 60 | 70 | 26 | 20 | 30 | | |
| 5 | 70 | 60 | 27 | 920 | 930 | | |
| 6 | 50 | 60 | 28 | 60 | 50 | | |
| 7 | 60 | 50 | 29 | 460 | 450 | | |
| 8 | 40 | 50 | 30 | 90 | 100 | | |
| 9 | 50 | 40 | 31 | 890 | 900 | | |
| 10 | 80 | 70 | 32 | 990 | 1000 | | |
| 11 | 70 | 80 | 33 | 1000 | 1010 | | |
| 12 | 80 | 90 | 34 | 20 | 30 | | |
| 13 | 90 | 100 | 35 | 1020 | 1030 | | |
| 14 | 100 | 90 | 36 | 1520 | 1530 | | |
| 15 | 90 | 80 | 37 | 380 | 390 | | |
| 16 | 60 | 70 | 38 | 1380 | 1390 | | |
| 17 | 160 | 170 | 39 | 1080 | 1090 | | |
| 18 | 260 | 270 | 40 | 760 | 750 | | |
| 19 | 560 | 570 | 41 | 1690 | 1680 | | |
| 20 | 570 | 560 | 42 | 300 | 290 | | |
| 21 | 70 | 80 | 43 | 1850 | 1840 | | |
| 22 | 170 | 180 | 44 | 1220 | 1210 | | |



| Α | | | | # Correct |
|----|-------------------------|-----|--------|-----------|
| | Round to the nearest te | en. | | |
| 1 | 21 ≈ | 23 | 79 ≈ | |
| 2 | 31 ≈ | 24 | 89 ≈ | |
| 3 | 41 ≈ | 25 | 99 ≈ | |
| 4 | 81 ≈ | 26 | 109 ≈ | |
| 5 | 59 ≈ | 27 | 119 ≈ | |
| 6 | 49 ≈ | 28 | 149 ≈ | |
| 7 | 39 ≈ | 29 | 311 ≈ | |
| 8 | 19 ≈ | 30 | 411 ≈ | |
| 9 | 36 ≈ | 31 | 519 ≈ | |
| 10 | 34 ≈ | 32 | 619 ≈ | |
| 11 | 56 ≈ | 33 | 629 ≈ | |
| 12 | 54 ≈ | 34 | 639 ≈ | |
| 13 | 77 ≈ | 35 | 669 ≈ | |
| 14 | 73 ≈ | 36 | 969 ≈ | |
| 15 | 68 ≈ | 37 | 979 ≈ | |
| 16 | 62 ≈ | 38 | 989 ≈ | |
| 17 | 25 ≈ | 39 | 999 ≈ | |
| 18 | 35 ≈ | 40 | 1109 ≈ | |
| 19 | 45 ≈ | 41 | 1119 ≈ | |
| 20 | 75 ≈ | 42 | 3227 ≈ | |
| 21 | 85 ≈ | 43 | 5487 ≈ | |
| 22 | 15 ≈ | 44 | 7885 ≈ | |



Lesson 17:

Estimate sums by rounding and apply to solve measurement word problems.

| В | Round to the nearest te | | nt | # Correct |
|----|-------------------------|----|--------|-----------|
| 1 | 11 ≈ | 23 | 79 ≈ | |
| 2 | 21 ≈ | 24 | 89 ≈ | |
| 3 | 31 ≈ | 25 | 99 ≈ | |
| 4 | 71 ≈ | 26 | 109 ≈ | |
| 5 | 69 ≈ | 27 | 119 ≈ | |
| 6 | 59 ≈ | 28 | 159 ≈ | |
| 7 | 49 ≈ | 29 | 211 ≈ | |
| 8 | 19 ≈ | 30 | 311 ≈ | |
| 9 | 26 ≈ | 31 | 418 ≈ | |
| 10 | 24 ≈ | 32 | 518 ≈ | |
| 11 | 46 ≈ | 33 | 528 ≈ | |
| 12 | 44 ≈ | 34 | 538 ≈ | |
| 13 | 87 ≈ | 35 | 568 ≈ | |
| 14 | 83 ≈ | 36 | 968 ≈ | |
| 15 | 78 ≈ | 37 | 978 ≈ | |
| 16 | 72 ≈ | 38 | 988 ≈ | |
| 17 | 15 ≈ | 39 | 998 ≈ | |
| 18 | 25 ≈ | 40 | 1108 ≈ | |
| 19 | 35 ≈ | 41 | 1118 ≈ | |
| 20 | 75 ≈ | 42 | 2337 ≈ | |
| 21 | 85 ≈ | 43 | 4578 ≈ | |
| 22 | 45 ≈ | 44 | 8785 ≈ | |



Lesson 17:

Estimate sums by rounding and apply to solve measurement word problems.

| Α | | | | : | # Correct |
|----|------------------------|---------|---|--------|-----------|
| | Round to the nearest h | undred. | _ | | |
| 1 | 201 ≈ | 23 | 3 | 350 ≈ | |
| 2 | 301 ≈ | 24 | 4 | 1350 ≈ | |
| 3 | 401 ≈ | 25 | 5 | 450 ≈ | |
| 4 | 801 ≈ | 26 | 6 | 5450 ≈ | |
| 5 | 1801 ≈ | 27 | 7 | 850 ≈ | |
| 6 | 2801 ≈ | 28 | 8 | 6850 ≈ | |
| 7 | 3801 ≈ | 29 | 9 | 649 ≈ | |
| 8 | 7801 ≈ | 30 | р | 651 ≈ | |
| 9 | 290 ≈ | 31 | 1 | 691 ≈ | |
| 10 | 390 ≈ | 32 | 2 | 791 ≈ | |
| 11 | 490 ≈ | 33 | 3 | 891 ≈ | |
| 12 | 890 ≈ | 34 | 4 | 991 ≈ | |
| 13 | 1890 ≈ | 35 | 5 | 995 ≈ | |
| 14 | 2890 ≈ | 36 | 6 | 998 ≈ | |
| 15 | 3890 ≈ | 37 | 7 | 9998 ≈ | |
| 16 | 7890 ≈ | 38 | 8 | 7049 ≈ | |
| 17 | 512 ≈ | 39 | 9 | 4051 ≈ | |
| 18 | 2512 ≈ | 40 | b | 8350 ≈ | |
| 19 | 423 ≈ | 41 | 1 | 3572 ≈ | |
| 20 | 3423 ≈ | 42 | 2 | 9754 ≈ | |
| 21 | 677 ≈ | 43 | 3 | 2915 ≈ | |
| 22 | 4677 ≈ | 44 | 4 | 9996 ≈ | |



Lesson 20:

Estimate differences by rounding and apply to solve measurement word problems.

| В | Round to the nearest h | | nt | # Correct | | | |
|----|------------------------|----|--------|-----------|--|--|--|
| 1 | 101 ≈ | 23 | 250 ≈ | | | | |
| 2 | 201 ≈ | 24 | 1250 ≈ | | | | |
| 3 | 301 ≈ | 25 | 350 ≈ | | | | |
| 4 | 701 ≈ | 26 | 5350 ≈ | | | | |
| 5 | 1701 ≈ | 27 | 750 ≈ | | | | |
| 6 | 2701 ≈ | 28 | 6750 ≈ | | | | |
| 7 | 3701 ≈ | 29 | 649 ≈ | | | | |
| 8 | 8701 ≈ | 30 | 652 ≈ | | | | |
| 9 | 190 ≈ | 31 | 692 ≈ | | | | |
| 10 | 290 ≈ | 32 | 792 ≈ | | | | |
| 11 | 390 ≈ | 33 | 892 ≈ | | | | |
| 12 | 790 ≈ | 34 | 992 ≈ | | | | |
| 13 | 1790 ≈ | 35 | 996 ≈ | | | | |
| 14 | 2790 ≈ | 36 | 999 ≈ | | | | |
| 15 | 3790 ≈ | 37 | 9999 ≈ | | | | |
| 16 | 8790 ≈ | 38 | 4049 ≈ | | | | |
| 17 | 412 ≈ | 39 | 2051 ≈ | | | | |
| 18 | 2412 ≈ | 40 | 7350 ≈ | | | | |
| 19 | 523 ≈ | 41 | 4572 ≈ | | | | |
| 20 | 3523 ≈ | 42 | 8754 ≈ | | | | |
| 21 | 877 ≈ | 43 | 3915 ≈ | | | | |
| 22 | 4877 ≈ | 44 | 9997 ≈ | | | | |



Lesson 20:

Estimate differences by rounding and apply to solve measurement word problems.

| Α | Multiply | | # | Correct |
|----|----------|----|---------|---------|
| 1 | 2 x 1 = | 23 | 2 x 7 = | |
| 2 | 2 x 2 = | 24 | 5 x 5 = | |
| 3 | 2 x 3 = | 25 | 5 x 6 = | |
| 4 | 4 x 1 = | 26 | 5 x 7 = | |
| 5 | 4 x 2 = | 27 | 4 x 5 = | |
| 6 | 4 x 3 = | 28 | 4 x 6 = | |
| 7 | 1 x 6 = | 29 | 4 x 7 = | |
| 8 | 2 x 6 = | 30 | 3 x 5 = | |
| 9 | 1 x 8 = | 31 | 3 x 6 = | |
| 10 | 2 x 8 = | 32 | 3 x 7 = | |
| 11 | 3 x 1 = | 33 | 2 x 7 = | |
| 12 | 3 x 2 = | 34 | 2 x 8 = | |
| 13 | 3 x 3 = | 35 | 2 x 9 = | |
| 14 | 5 x 1 = | 36 | 5 x 7 = | |
| 15 | 5 x 2 = | 37 | 5 x 8 = | |
| 16 | 5 x 3 = | 38 | 5 x 9 = | |
| 17 | 1 x 7 = | 39 | 4 x 7 = | |
| 18 | 2 x 7 = | 40 | 4 x 8 = | |
| 19 | 1 x 9 = | 41 | 4 x 9 = | |
| 20 | 2 x 9 = | 42 | 3 x 7 = | |
| 21 | 2 x 5 = | 43 | 3 x 8 = | |
| 22 | 2 x 6 = | 44 | 3 x 9 = | |



Lesson 1: Study commutativity to find known facts of 6, 7, 8, and 9.

| В | Multiply. | Improvemen | t # Correct |
|----|-----------|------------|-------------|
| 1 | 5 x 1 = | 23 | 5 x 7 = |
| 2 | 5 x 2 = | 24 | 2 x 5 = |
| 3 | 5 x 3 = | 25 | 2 x 6 = |
| 4 | 3 x 1 = | 26 | 2 x 7 = |
| 5 | 3 x 2 = | 27 | 3 x 5 = |
| 6 | 3 x 3 = | 28 | 3 x 6 = |
| 7 | 1 x 7 = | 29 | 3 x 7 = |
| 8 | 2 x 7 = | 30 | 4 x 5 = |
| 9 | 1 x 9 = | 31 | 4 x 6 = |
| 10 | 2 x 9 = | 32 | 4 x 7 = |
| 11 | 2 x 1 = | 33 | 5 x 7 = |
| 12 | 2 x 2 = | 34 | 5 x 8 = |
| 13 | 2 x 3 = | 35 | 5 x 9 = |
| 14 | 4 x 1 = | 36 | 2 x 7 = |
| 15 | 4 x 2 = | 37 | 2 x 8 = |
| 16 | 4 x 3 = | 38 | 2 x 9 = |
| 17 | 1 x 6 = | 39 | 3 x 7 = |
| 18 | 2 x 6 = | 40 | 3 x 8 = |
| 19 | 1 x 8 = | 41 | 3 x 9 = |
| 20 | 2 x 8 = | 42 | 4 x 7 = |
| 21 | 5 x 5 = | 43 | 4 x 8 = |
| 22 | 5 x 6 = | 44 | 4 x 9 = |



Lesson 1: Study commutativity to find known facts of 6, 7, 8, and 9.

Correct

| | Multiply. | | | | |
|----|-----------|--|----|----------|--|
| 1 | 2 x 2 = | | 23 | 5 x 6 = | |
| 2 | 2 x 3 = | | 24 | 6 x 5 = | |
| 3 | 3 x 2 = | | 25 | 5 x 7 = | |
| 4 | 2 x 4 = | | 26 | 7 x 5 = | |
| 5 | 4 x 2 = | | 27 | 5 x 8 = | |
| 6 | 2 x 5 = | | 28 | 8 x 5 = | |
| 7 | 5 x 2 = | | 29 | 5 x 9 = | |
| 8 | 2 x 6 = | | 30 | 9 x 5 = | |
| 9 | 6 x 2 = | | 31 | 5 x 10 = | |
| 10 | 2 x 7 = | | 32 | 10 x 5 = | |
| 11 | 7 x 2 = | | 33 | 3 x 3 = | |
| 12 | 2 x 8 = | | 34 | 3 x 4 = | |
| 13 | 8 x 2 = | | 35 | 4 x 3 = | |
| 14 | 2 x 9 = | | 36 | 3 x 6 = | |
| 15 | 9 x 2 = | | 37 | 6 x 3 = | |
| 16 | 2 x 10 = | | 38 | 3 x 7 = | |
| 17 | 10 x 2 = | | 39 | 7 x 3 = | |
| 18 | 5 x 3 = | | 40 | 3 x 8 = | |
| 19 | 3 x 5 = | | 41 | 8 x 3 = | |
| 20 | 5 x 4 = | | 42 | 3 x 9 = | |





21

22

Lesson 2:

Apply the distributive and commutative properties to relate multiplication facts $5 \times n + n$ to $6 \times n$ and $n \times 6$ where n is the size of the unit.

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44

9 x 3 =

4 x 4 =

4 x 5 =

5 x 5 =

32

| В | Multiply. | Improvemer | nt | # Correct |
|----|-----------|------------|----------|-----------|
| 1 | 5 x 2 = | 23 | 2 x 6 = | |
| 2 | 2 x 5 = | 24 | 6 x 2 = | |
| 3 | 5 x 3 = | 25 | 2 x 7 = | |
| 4 | 3 x 5 = | 26 | 7 x 2 = | |
| 5 | 5 x 4 = | 27 | 2 x 8 = | |
| 6 | 4 x 5 = | 28 | 8 x 2 = | |
| 7 | 5 x 5 = | 29 | 2 x 9 = | |
| 8 | 5 x 6 = | 30 | 9 x 2 = | |
| 9 | 6 x 5 = | 31 | 2 x 10 = | |
| 10 | 5 x 7 = | 32 | 10 x 2 = | |
| 11 | 7 x 5 = | 33 | 3 x 3 = | |
| 12 | 5 x 8 = | 34 | 3 x 4 = | |
| 13 | 8 x 5 = | 35 | 4 x 3 = | |
| 14 | 5 x 9 = | 36 | 3 x 6 = | |
| 15 | 9 x 5 = | 37 | 6 x 3 = | |
| 16 | 5 x 10 = | 38 | 3 x 7 = | |
| 17 | 10 x 5 = | 39 | 7 x 3 = | |
| 18 | 2 x 2 = | 40 | 3 x 8 = | |
| 19 | 2 x 3 = | 41 | 8 x 3 = | |
| 20 | 3 x 2 = | 42 | 3 x 9 = | |
| 21 | 2 x 4 = | 43 | 9 x 3 = | |
| 22 | 4 x 2 = | 44 | 3 x 3 = | |



Lesson 2:

Apply the distributive and commutative properties to relate multiplication facts $5 \times n + n$ to $6 \times n$ and $n \times 6$ where n is the size of the unit.

| wumpiy. | | | |
|---------|---------|---------|---------|
| 6 x 1 = | 6 x 2 = | 6 x 3 = | 6 x 4 = |
| 6 x 5 = | 6 x 1 = | 6 x 2 = | 6 x 1 = |
| 6 x 3 = | 6 x 1 = | 6 x 4 = | 6 x 1 = |
| 6 x 5 = | 6 x 1 = | 6 x 2 = | 6 x 3 = |
| 6 x 2 = | 6 x 4 = | 6 x 2 = | 6 x 5 = |
| 6 x 2 = | 6 x 1 = | 6 x 2 = | 6 x 3 = |
| 6 x 1 = | 6 x 3 = | 6 x 2 = | 6 x 3 = |
| 6 x 4 = | 6 x 3 = | 6 x 5 = | 6 x 3 = |
| 6 x 4 = | 6 x 1 = | 6 x 4 = | 6 x 2 = |
| 6 x 4 = | 6 x 3 = | 6 x 4 = | 6 x 5 = |
| 6 x 4 = | 6 x 5 = | 6 x 1 = | 6 x 5 = |
| 6 x 2 = | 6 x 5 = | 6 x 3 = | 6 x 5 = |
| 6 x 4 = | 6 x 2 = | 6 x 4 = | 6 x 3 = |
| 6 x 5 = | 6 x 3 = | 6 x 2 = | 6 x 4 = |
| 6 x 3 = | 6 x 5 = | 6 x 2 = | 6 x 4 = |

Multiply.

multiply by 6 (1-5)



Lesson 5:

Count by units of 7 to multiply and divide using number bonds to decompose.

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| IVI | ult | iply | ' . | | | | | | | | | | | | | |
|-----|-----|------|------------|-------|---|----|---|-------|---|---|---|-----|---|----|---|--|
| 6 | х | 1 | = | 6 | х | 2 | = | 6 | х | 3 | = | _ 6 | х | 4 | = | |
| 6 | х | 5 | = | 6 | x | 6 | = | 6 | х | 7 | = | _ 6 | х | 8 | = | |
| 6 | х | 9 | = | 6 | x | 10 | = | 6 | х | 5 | = | _ 6 | х | 6 | = | |
| 6 | х | 5 | = | 6 | х | 7 | = | 6 | х | 5 | = | _ 6 | х | 8 | = | |
| 6 | х | 5 | = | 6 | x | 9 | = | 6 | х | 5 | = | 6 | х | 10 | = | |
| 6 | х | 6 | = | 6 | x | 5 | = | 6 | х | 6 | = | _ 6 | х | 7 | = | |
| 6 | х | 6 | = | 6 | x | 8 | = | 6 | х | 6 | = | _ 6 | х | 9 | = | |
| 6 | х | 6 | = | 6 | x | 7 | = | 6 | x | 6 | = | _ 6 | x | 7 | = | |
| 6 | х | 8 | = | 6 | x | 7 | = | 6 | x | 9 | = | 6 | х | 7 | = | |
| 6 | х | 8 | = | 6 | х | 6 | = | 6 | х | 8 | = | _ 6 | х | 7 | = | |
| 6 | х | 8 | = | 6 | x | 9 | = | 6 | x | 9 | = | _ 6 | х | 6 | = | |
| 6 | х | 9 | = | 6 | x | 7 | = | 6 | х | 9 | = | _ 6 | х | 8 | = | |
| 6 | х | 9 | = | 6 | х | 8 | = | 6 | х | 6 | = | _ 6 | х | 9 | = | |
| 6 | x | 7 | = | 6 | x | 9 | = | 6 | х | 6 | = | 6 | х | 8 | = | |
| 6 | х | 9 | = | 6 | х | 7 | = | 6 | х | 6 | = | 6 | х | 8 | = | |

multiply by 6 (6-10)



Lesson 6:

Use the distributive property as a strategy to multiply and divide using units of 6 and 7.

Multiply.

| 7 x 1 = | 7 x 2 = | 7 x 3 = | 7 x 4 = |
|---------|---------|---------|---------|
| 7 x 5 = | 7 x 1 = | 7 x 2 = | 7 x 1 = |
| 7 x 3 = | 7 x 1 = | 7 x 4 = | 7 x 1 = |
| 7 x 5 = | 7 x 1 = | 7 x 2 = | 7 x 3 = |
| 7 x 2 = | 7 x 4 = | 7 x 2 = | 7 x 5 = |
| 7 x 2 = | 7 x 1 = | 7 x 2 = | 7 x 3 = |
| 7 x 1 = | 7 x 3 = | 7 x 2 = | 7 x 3 = |
| 7 x 4 = | 7 x 3 = | 7 x 5 = | 7 x 3 = |
| 7 x 4 = | 7 x 1 = | 7 x 4 = | 7 x 2 = |
| 7 x 4 = | 7 x 3 = | 7 x 4 = | 7 x 5 = |
| 7 x 4 = | 7 x 5 = | 7 x 1 = | 7 x 5 = |
| 7 x 2 = | 7 x 5 = | 7 x 3 = | 7 x 5 = |
| 7 x 4 = | 7 x 2 = | 7 x 4 = | 7 x 3 = |
| 7 x 5 = | 7 x 3 = | 7 x 2 = | 7 x 4 = |
| 7 x 3 = | 7 x 5 = | 7 x 2 = | 7 x 4 = |

multiply by 7 (1–5)



Lesson 7:

Interpret the unknown in multiplication and division to model and solve problems using units of 6 and 7.
Multiply.

| 7 x 1 = | 7 x 2 = | 7 x 3 = | 7 x 4 = |
|---------|----------|---------|----------|
| 7 x 5 = | 7 x 6 = | 7 x 7 = | 7 x 8 = |
| 7 x 9 = | 7 x 10 = | 7 x 5 = | 7 x 6 = |
| 7 x 5 = | 7 x 7 = | 7 x 5 = | 7 x 8 = |
| 7 x 5 = | 7 x 9 = | 7 x 5 = | 7 x 10 = |
| 7 x 6 = | 7 x 5 = | 7 x 6 = | 7 x 7 = |
| 7 x 6 = | 7 x 8 = | 7 x 6 = | 7 x 9 = |
| 7 x 6 = | 7 x 7 = | 7 x 6 = | 7 x 7 = |
| 7 x 8 = | 7 x 7 = | 7 x 9 = | 7 x 7 = |
| 7 x 8 = | 7 x 6 = | 7 x 8 = | 7 x 7 = |
| 7 x 8 = | 7 x 9 = | 7 x 9 = | 7 x 6 = |
| 7 x 9 = | 7 x 7 = | 7 x 9 = | 7 x 8 = |
| 7 x 9 = | 7 x 8 = | 7 x 6 = | 7 x 9 = |
| 7 x 7 = | 7 x 9 = | 7 x 6 = | 7 x 8 = |
| 7 x 9 = | 7 x 7 = | 7 x 6 = | 7 x 8 = |

multiply by 7 (6–10)



Lesson 8:

Understand the function of parentheses and apply to solving problems.

A STORY OF UNITS

Multiply.

8 x 4 = 8 x 1 = 8 x 2 = 8 x 3 = 8 x 2 = 8 x 1 = ____ 8 x 5 = 8 x 1 = 8 x 4 = 8 x 3 = 8 x 1 = 8 x 1 = 8 x 5 = 8 x 1 = 8 x 2 = 8 x 3 = 8 x 2 = 8 x 4 = 8 x 2 = 8 x 5 = 8 x 2 = ____ 8 x 2 = 8 x 3 = 8 x 1 = 8 x 2 = ____ 8 x 1 = 8 x 3 = 8 x 3 = 8 x 3 = ____ 8 x 5 = 8 x 4 = 8 x 3 = 8 x 4 = 8 x 1 = 8 x 4 = 8 x 2 = 8 x 4 = _____ 8 x 5 = ____ 8 x 3 = 8 x 4 = 8 x 4 = 8 x 5 = 8 x 1 = 8 x 5 = 8 x 2 = 8 x 5 = _____ 8 x 3 = 8 x 5 = 8 x 4 = 8 x 2 = 8 x 4 = 8 x 3 = 8 x 5 = _____ 8 x 3 = _____ 8 x 2 = ____ 8 x 4 = ___ 8 x 2 = ____ 8 x 3 = _____ 8 x 5 = _____ 8 x 4 =

multiply by 8 (1-5)



Lesson 11:

Interpret the unknown in multiplication and division to model and solve problems.

| Multiply | | | |
|----------|----------|---------|----------|
| 8 x 1 = | 8 x 2 = | 8 x 3 = | 8 x 4 = |
| 8 x 5 = | 8 x 6 = | 8 x 7 = | 8 x 8 = |
| 8 x 9 = | 8 x 10 = | 8 x 5 = | 8 x 6 = |
| 8 x 5 = | 8 x 7 = | 8 x 5 = | 8 x 8 = |
| 8 x 5 = | 8 x 9 = | 8 x 5 = | 8 x 10 = |
| 8 x 6 = | 8 x 5 = | 8 x 6 = | 8 x 7 = |
| 8 x 6 = | 8 x 8 = | 8 x 6 = | 8 x 9 = |
| 8 x 6 = | 8 x 7 = | 8 x 6 = | 8 x 7 = |
| 8 x 8 = | 8 x 7 = | 8 x 9 = | 8 x 7 = |
| 8 x 8 = | 8 x 6 = | 8 x 8 = | 8 x 7 = |
| 8 x 8 = | 8 x 9 = | 8 x 9 = | 8 x 6 = |
| 8 x 9 = | 8 x 7 = | 8 x 9 = | 8 x 8 = |
| 8 x 9 = | 8 x 8 = | 8 x 6 = | 8 x 9 = |
| 8 x 7 = | 8 x 9 = | 8 x 6 = | 8 x 8 = |
| 8 x 9 = | 8 x 7 = | 8 x 6 = | 8 x 8 = |

Multiply

multiply by 8 (6-10)



Lesson 12:

Apply the distributive property and the fact 9 = 10 - 1 as a strategy to multiply.

| Α | Multiply or divide | | : | # Correct |
|----|--------------------|----|-----------|-----------|
| 1 | 2 x 8 = | 23 | x 8 = 80 | |
| 2 | 3 x 8 = | 24 | x 8 = 32 | |
| 3 | 4 x 8 = | 25 | x 8 = 24 | |
| 4 | 5 x 8 = | 26 | 80 ÷ 8 = | |
| 5 | 1 x 8 = | 27 | 40 ÷ 8 = | |
| 6 | 16 ÷ 8 = | 28 | 8 ÷ 1 = | |
| 7 | 24 ÷ 8 = | 29 | 16 ÷ 8 = | |
| 8 | 40 ÷ 8 = | 30 | 24 ÷ 8 = | |
| 9 | 8 ÷ 1 = | 31 | x 8 = 48 | |
| 10 | 32 ÷ 8 = | 32 | x 8 = 56 | |
| 11 | 6 x 8 = | 33 | x 8 = 72 | |
| 12 | 7 x 8 = | 34 | x 8 = 64 | |
| 13 | 8 x 8 = | 35 | 56 ÷ 8 = | |
| 14 | 9 x 8 = | 36 | 72 ÷ 8 = | |
| 15 | 10 x 8 = | 37 | 48 ÷ 8 = | |
| 16 | 64 ÷ 8 = | 38 | 64 ÷ 8 = | |
| 17 | 56 ÷ 8 = | 39 | 11 x 8 = | |
| 18 | 72 ÷ 8 = | 40 | 88 ÷ 8 = | |
| 19 | 48 ÷ 8 = | 41 | 12 x 8 = | |
| 20 | 80 ÷ 8 = | 42 | 96 ÷ 8 = | |
| 21 | x 8 = 40 | 43 | 14 x 8 = | |
| 22 | x 8 = 16 | 44 | 112 ÷ 8 = | |



Lesson 13: Identify and use arithmetic patterns to multiply.

| В | Multiply or divide. | Improvemer | nt | # Correct |
|----|---------------------|------------|-----------|-----------|
| 1 | 1 x 8 = | 23 | x 8 = 48 | |
| 2 | 2 x 8 = | 24 | x 8 = 80 | |
| 3 | 3 x 8 = | 25 | x 8 = 24 | |
| 4 | 4 x 8 = | 26 | 16 ÷ 8 = | |
| 5 | 5 x 8 = | 27 | 8 ÷ 1 = | |
| 6 | 24 ÷ 8 = | 28 | 80 ÷ 8 = | |
| 7 | 16 ÷ 8 = | 29 | 40 ÷ 8 = | |
| 8 | 32 ÷ 8 = | 30 | 24 ÷ 8 = | |
| 9 | 8 ÷ 1 = | 31 | x 8 = 64 | |
| 10 | 40 ÷ 8 = | 32 | x 8 = 32 | |
| 11 | 10 x 8 = | 33 | x 8 = 72 | |
| 12 | 6 x 8 = | 34 | x 8 = 56 | |
| 13 | 7 x 8 = | 35 | 64 ÷ 8 = | |
| 14 | 8 x 8 = | 36 | 72 ÷8 = | |
| 15 | 9 x 8 = | 37 | 48 ÷ 8 = | |
| 16 | 56 ÷ 8 = | 38 | 56 ÷ 8 = | |
| 17 | 48 ÷ 8 = | 39 | 11 x 8 = | |
| 18 | 64 ÷ 8 = | 40 | 88 ÷ 8 = | |
| 19 | 80 ÷ 8 = | 41 | 12 x 8 = | |
| 20 | 72 ÷8 = | 42 | 96 ÷ 8 = | |
| 21 | x 8 = 16 | 43 | 13 x 8 = | |
| 22 | x 8 = 40 | 44 | 104 ÷ 8 = | |



Lesson 13: Identify and use arithmetic patterns to multiply.

| Multiply. | | | |
|-----------|---------|---------|---------|
| 9 x 1 = | 9 x 2 = | 9 x 3 = | 9 x 4 = |
| 9 x 5 = | 9 x 1 = | 9 x 2 = | 9 x 1 = |
| 9 x 3 = | 9 x 1 = | 9 x 4 = | 9 x 1 = |
| 9 x 5 = | 9 x 1 = | 9 x 2 = | 9 x 3 = |
| 9 x 2 = | 9 x 4 = | 9 x 2 = | 9 x 5 = |
| 9 x 2 = | 9 x 1 = | 9 x 2 = | 9 x 3 = |
| 9 x 1 = | 9 x 3 = | 9 x 2 = | 9 x 3 = |
| 9 x 4 = | 9 x 3 = | 9 x 5 = | 9 x 3 = |
| 9 x 4 = | 9 x 1 = | 9 x 4 = | 9 x 2 = |
| 9 x 4 = | 9 x 3 = | 9 x 4 = | 9 x 5 = |
| 9 x 4 = | 9 x 5 = | 9 x 1 = | 9 x 5 = |
| 9 x 2 = | 9 x 5 = | 9 x 3 = | 9 x 5 = |
| 9 x 4 = | 9 x 2 = | 9 x 4 = | 9 x 3 = |
| 9 x 5 = | 9 x 3 = | 9 x 2 = | 9 x 4 = |
| 9 x 3 = | 9 x 5 = | 9 x 2 = | 9 x 4 = |

multiply by 9 (1-5)



Lesson 14: Identify and use arithmetic patterns to multiply.

| | Mul | tipl | y. | | | | | | | | | | | | | |
|-------------|-------|------|----|-------|---|----|---|-------|---|---|---|---|---|----|---|--|
| | 9 x | 1 | = | 9 | x | 2 | = | 9 | х | 3 | = | 9 | х | 4 | = | |
| | 9 x | 5 | = | 9 | x | 6 | = | 9 | x | 7 | = | 9 | х | 8 | = | |
| | 9 x | 9 | = | 9 | х | 10 | = | 9 | х | 5 | = | 9 | х | 6 | = | |
| | 9 x | 5 | = | 9 | x | 7 | = | 9 | х | 5 | = | 9 | x | 8 | = | |
| | 9 x | 5 | = | 9 | х | 9 | = | 9 | х | 5 | = | 9 | х | 10 | = | |
| | 9 x | 6 | = | 9 | x | 5 | = | 9 | x | 6 | = | 9 | х | 7 | = | |
| | 9 x | 6 | = | 9 | х | 8 | = | 9 | х | 6 | = | 9 | х | 9 | = | |
| | 9 x | 6 | = | 9 | x | 7 | = | 9 | x | 6 | = | 9 | х | 7 | = | |
| | 9 x | 8 | = | 9 | x | 7 | = | 9 | x | 9 | = | 9 | х | 7 | = | |
| | 9 x | 8 | = | 9 | x | 6 | = | 9 | х | 8 | = | 9 | x | 7 | = | |
| | 9 x | 8 | = | 9 | х | 9 | = | 9 | х | 9 | = | 9 | х | 6 | = | |
| | 9 x | 9 | = | 9 | x | 7 | = | 9 | х | 9 | = | 9 | x | 8 | = | |
| | 9 x | 9 | = | 9 | х | 8 | = | 9 | х | 6 | = | 9 | х | 9 | = | |
| | 9 x | 7 | = | 9 | x | 9 | = | 9 | x | 6 | = | 9 | x | 8 | = | |
| | 9 x | 9 | = | 9 | х | 7 | = | 9 | х | 6 | = | 9 | х | 8 | = | |
| multiply by | 9 (6- | -10 |) | | | | | | | | | | | | | |



Lesson 15:

Interpret the unknown in multiplication and division to model and solve problems.

| Α | Multiply or divide. | | | # Correct |
|----|---------------------|----|-----------|-----------|
| 1 | 2 x 9 = | 23 | x 9 = 90 | |
| 2 | 3 x 9 = | 24 | x 9 = 18 | |
| 3 | 4 x 9 = | 25 | x 9 = 27 | |
| 4 | 5 x 9 = | 26 | 90 ÷ 9 = | |
| 5 | 1 x 9 = | 27 | 45 ÷ 9 = | |
| 6 | 18 ÷ 9 = | 28 | 9 ÷ 9 = | |
| 7 | 27 ÷ 9 = | 29 | 18 ÷ 9 = | |
| 8 | 45 ÷ 9 = | 30 | 27 ÷ 9 = | |
| 9 | 9 ÷ 9 = | 31 | x 9 = 54 | |
| 10 | 36 ÷ 9 = | 32 | x 9 = 63 | |
| 11 | 6 x 9 = | 33 | x 9 = 81 | |
| 12 | 7 x 9 = | 34 | x 9 = 72 | |
| 13 | 8 x 9 = | 35 | 63 ÷ 9 = | |
| 14 | 9 x 9 = | 36 | 81 ÷ 9 = | |
| 15 | 10 x 9 = | 37 | 54 ÷ 9 = | |
| 16 | 72 ÷ 9 = | 38 | 72 ÷ 9 = | |
| 17 | 63 ÷ 9 = | 39 | 11 x 9 = | |
| 18 | 81 ÷ 9 = | 40 | 99 ÷ 9 = | |
| 19 | 54 ÷ 9 = | 41 | 12 x 9 = | |
| 20 | 90 ÷ 9 = | 42 | 108 ÷ 9 = | |
| 21 | x 9 = 45 | 43 | 14 x 9 = | |
| 22 | x 9 = 9 | 44 | 126 ÷ 9 = | |



Corroct



Lesson 16:

Reason about and explain arithmetic patterns using units of 0 and 1 as they relate to multiplication and division.

| В | Multiply or divide. | Improvemer | nt | # Correct |
|----|---------------------|------------|-----------|-----------|
| 1 | 1 x 9 = | 23 | x 9 = 18 | |
| 2 | 2 x 9 = | 24 | x 9 = 90 | |
| 3 | 3 x 9 = | 25 | x 9 = 27 | |
| 4 | 4 x 9 = | 26 | 18 ÷ 9 = | |
| 5 | 5 x 9 = | 27 | 9 ÷ 9 = | |
| 6 | 27 ÷ 9 = | 28 | 90 ÷ 9 = | |
| 7 | 18 ÷ 9 = | 29 | 45 ÷ 9 = | |
| 8 | 36 ÷ 9 = | 30 | 27 ÷ 9 = | |
| 9 | 9 ÷ 9 = | 31 | x 9 = 27 | |
| 10 | 45 ÷ 9 = | 32 | x 9 = 36 | |
| 11 | 10 x 9 = | 33 | x 9 = 81 | |
| 12 | 6 x 9 = | 34 | x 9 = 63 | |
| 13 | 7 x 9 = | 35 | 72 ÷ 9 = | |
| 14 | 8 x 9 = | 36 | 81 ÷ 9 = | |
| 15 | 9 x 9 = | 37 | 54 ÷ 9 = | |
| 16 | 63 ÷ 9 = | 38 | 63 ÷ 9 = | |
| 17 | 54 ÷ 9 = | 39 | 11 x 9 = | |
| 18 | 72 ÷ 9 = | 40 | 99 ÷ 9 = | |
| 19 | 90 ÷ 9 = | 41 | 12 x 9 = | |
| 20 | 81 ÷ 9 = | 42 | 108 ÷ 9 = | |
| 21 | x 9 = 9 | 43 | 13 x 9 = | |
| 22 | x 9 = 45 | 44 | 117 ÷ 9 = | |



Lesson 16:

Reason about and explain arithmetic patterns using units of 0 and 1 as they relate to multiplication and division.

| Α | Complete the number sen | tence. | Ŧ | Correct |
|----|-------------------------|--------|-----------|---------|
| 1 | x 1 = 2 | 23 | 9 ÷ = 9 | |
| 2 | x 1 = 3 | 24 | 8 x = 8 | |
| 3 | x 1 = 4 | 25 | x 1 = 1 | |
| 4 | x 1 = 9 | 26 | 0 ÷ 3 = | |
| 5 | 8 x = 0 | 27 | x 1 = 7 | |
| 6 | 9 x = 0 | 28 | 6 x = 0 | |
| 7 | 4 x = 0 | 29 | 4 x = 4 | |
| 8 | 5 x = 5 | 30 | 0 ÷ 8 = | |
| 9 | 6 x = 6 | 31 | 0 x = 0 | |
| 10 | 7 x = 7 | 32 | 1 ÷ 1 = | |
| 11 | 3 x = 3 | 33 | x 1 = 24 | |
| 12 | 0 ÷ 1 = | 34 | 17 x = 0 | |
| 13 | 0 ÷ 2 = | 35 | 32 x = 32 | |
| 14 | 0 ÷ 3 = | 36 | 0 ÷ 19 = | |
| 15 | 0 ÷ 6 = | 37 | 46 x = 0 | |
| 16 | 1 x = 1 | 38 | 0 ÷ 51 = | |
| 17 | 4 ÷ = 4 | 39 | 64 x = 64 | |
| 18 | 5 ÷ = 5 | 40 | x 1 = 79 | |
| 19 | 6 ÷ = 6 | 41 | 0 ÷ 82 = | |
| 20 | 8 ÷ = 8 | 42 | x 1 = 96 | |
| 21 | x 1 = 5 | 43 | 27 x = 27 | |
| 22 | 3 x = 0 | 44 | 43 x = 0 | |



Corroot



Lesson 18:

Solve two-step word problems involving all four operations and assess the reasonableness of solutions.

| В | Complete the number sentence. | Improvemer | nt # | Correct |
|----|-------------------------------|------------|-----------|---------|
| 1 | x 1 = 3 | 23 | 8 ÷ = 8 | |
| 2 | x 1 = 4 | 24 | 7 x = 7 | |
| 3 | x 1 = 5 | 25 | x 1 = 1 | |
| 4 | x 1 = 8 | 26 | 0 ÷ 5 = | |
| 5 | 7 x = 0 | 27 | x 1 = 9 | |
| 6 | 8 x = 0 | 28 | 5 x = 0 | |
| 7 | 3 x = 0 | 29 | 9 x = 9 | |
| 8 | 4 x = 4 | 30 | 0 ÷ 6 = | |
| 9 | 5 x = 5 | 31 | 1 ÷ 1 = | |
| 10 | 6 x = 6 | 32 | 0 x = 0 | |
| 11 | 2 x = 2 | 33 | x 1 = 34 | |
| 12 | 0 ÷ 2 = | 34 | 16 x = 0 | |
| 13 | 0 ÷ 3 = | 35 | 31 x = 31 | |
| 14 | 0 ÷ 4 = | 36 | 0 ÷ 18 = | |
| 15 | 0 ÷ 7 = | 37 | 45 x = 0 | |
| 16 | 1 x = 1 | 38 | 0 ÷ 52 = | |
| 17 | 3 ÷ = 3 | 39 | 63 x = 63 | |
| 18 | 4 ÷ = 4 | 40 | x 1 = 78 | |
| 19 | 5 ÷ = 5 | 41 | 0 ÷ 81 = | |
| 20 | 7 ÷ = 7 | 42 | x 1 = 97 | |
| 21 | x 1 = 6 | 43 | 26 x = 26 | |
| 22 | 4 x = 0 | 44 | 42 x = 0 | |



Lesson 18:

Solve two-step word problems involving all four operations and assess the reasonableness of solutions.

| Α | Multiply | | # Correct |
|----|----------|----|------------|
| 1 | 2 x 3 = | 23 | 3 8 x 40 = |
| 2 | 2 x 30 = | 24 | 4 80 x 4 = |
| 3 | 20 x 3 = | 25 | 5 9 x 6 = |
| 4 | 2 x 2 = | 26 | 6 90 x 6 = |
| 5 | 2 x 20 = | 27 | 7 2 x 5 = |
| 6 | 20 x 2 = | 28 | 3 2 x 50 = |
| 7 | 4 x 2 = | 29 | 9 3 x 90 = |
| 8 | 4 x 20 = | 30 |) 40 x 7 = |
| 9 | 40 x 2 = | 31 | 1 5 x 40 = |
| 10 | 5 x 3 = | 32 | 2 6 x 60 = |
| 11 | 50 x 3 = | 33 | 3 70 x 6 = |
| 12 | 3 x 50 = | 34 | 4 8 x 70 = |
| 13 | 4 x 4 = | 35 | 5 80 x 6 = |
| 14 | 40 x 4 = | 36 | 6 9 x 70 = |
| 15 | 4 x 40 = | 37 | 7 50 x 6 = |
| 16 | 6 x 3 = | 38 | 8 8 x 80 = |
| 17 | 6 x 30 = | 39 | 9 9 x 80 = |
| 18 | 60 x 3 = | 40 | 0 60 x 8 = |
| 19 | 7 x 5 = | 41 | 1 70 x 7 = |
| 20 | 70 x 5 = | 42 | 2 5 x 80 = |
| 21 | 7 x 50 = | 43 | 3 60 x 9 = |
| 22 | 8 x 4 = | 44 | 4 9 x 90 = |







Lesson 21:

Solve two-step word problems involving multiplying single-digit factors and multiples of 10 $\,$

| В | Multiply | Improvemen | nt | # Correct |
|----|----------|------------|----------|-----------|
| 1 | 4 x 2 = | 23 | 9 x 40 = | |
| 2 | 4 x 20 = | 24 | 90 x 4 = | |
| 3 | 40 x 2 = | 25 | 8 x 6 = | |
| 4 | 3 x 3 = | 26 | 80 x 6 = | |
| 5 | 3 x 30 = | 27 | 5 x 2 = | |
| 6 | 30 x 3 = | 28 | 5 x 20 = | |
| 7 | 3 x 2 = | 29 | 3 x 80 = | |
| 8 | 3 x 20 = | 30 | 40 x 8 = | |
| 9 | 30 x 2 = | 31 | 4 x 50 = | |
| 10 | 5 x 5 = | 32 | 8 x 80 = | |
| 11 | 50 x 5 = | 33 | 90 x 6 = | |
| 12 | 5 x 50 = | 34 | 6 x 70 = | |
| 13 | 4 x 3 = | 35 | 60 x 6 = | |
| 14 | 40 x 3 = | 36 | 7 x 70 = | |
| 15 | 4 x 30 = | 37 | 60 x 5 = | |
| 16 | 7 x 3 = | 38 | 6 x 80 = | |
| 17 | 7 x 30 = | 39 | 7 x 80 = | |
| 18 | 70 x 3 = | 40 | 80 x 6 = | |
| 19 | 6 x 4 = | 41 | 90 x 7 = | |
| 20 | 60 x 4 = | 42 | 8 x 50 = | |
| 21 | 6 x 40 = | 43 | 80 x 9 = | |
| 22 | 9 x 4 = | 44 | 7 x 90 = | |



Lesson 21:

Solve two-step word problems involving multiplying single-digit factors and multiples of 10

| Multiply. | | | |
|--|----------|----------|----------|
| 4 x 1 = | 4 x 2 = | 4 x 3 = | 4 x 4 = |
| 4 x 5 = | 4 x 6 = | 4 x 7 = | 4 x 8 = |
| 4 x 9 = | 4 x 10 = | 4 x 6 = | 4 x 7 = |
| 4 x 6 = | 4 x 8 = | 4 x 6 = | 4 x 9 = |
| 4 x 6 = | 4 x 10 = | 4 x 6 = | 4 x 7 = |
| 4 x 6 = | 4 x 7 = | 4 x 8 = | 4 x 7 = |
| 4 x 9 = | 4 x 7 = | 4 x 10 = | 4 x 7 = |
| 4 x 8 = | 4 x 6 = | 4 x 8 = | 4 x 7 = |
| 4 x 8 = | 4 x 9 = | 4 x 8 = | 4 x 10 = |
| 4 x 8 = | 4 x 9 = | 4 x 6 = | 4 x 9 = |
| 4 x 7 = | 4 x 9 = | 4 x 8 = | 4 x 9 = |
| 4 x 10 = | 4 x 9 = | 4 x 10 = | 4 x 6 = |
| 4 x 10 = | 4 x 7 = | 4 x 10 = | 4 x 8 = |
| 4 x 10 = | 4 x 9 = | 4 x 10 = | 4 x 6 = |
| 4 x 8 = | 4 x 10 = | 4 x 7 = | 4 x 9 = |
| $h_{1} h_{2} h_{3} h_{4} h_{5} h_{1} h_{1} h_{1} h_{2} h_{3} h_{1} h_{1$ | | | |

multiply by 4 (6–10)



Lesson 2: Decompose and recompose shapes to compare areas.

Multiply.

| 6 x 1 = | 6 x 2 = | 6 x 3 = | 6 x 4 = |
|---------|----------|---------|----------|
| 6 x 5 = | 6 x 6 = | 6 x 7 = | 6 x 8 = |
| 6 x 9 = | 6 x 10 = | 6 x 5 = | 6 x 6 = |
| 6 x 5 = | 6 x 7 = | 6 x 5 = | 6 x 8 = |
| 6 x 5 = | 6 x 9 = | 6 x 5 = | 6 x 10 = |
| 6 x 6 = | 6 x 5 = | 6 x 6 = | 6 x 7 = |
| 6 x 6 = | 6 x 8 = | 6 x 6 = | 6 x 9 = |
| 6 x 6 = | 6 x 7 = | 6 x 6 = | 6 x 7 = |
| 6 x 8 = | 6 x 7 = | 6 x 9 = | 6 x 7 = |
| 6 x 8 = | 6 x 6 = | 6 x 8 = | 6 x 7 = |
| 6 x 8 = | 6 x 9 = | 6 x 9 = | 6 x 6 = |
| 6 x 9 = | 6 x 7 = | 6 x 9 = | 6 x 8 = |
| 6 x 9 = | 6 x 8 = | 6 x 6 = | 6 x 9 = |
| 6 x 7 = | 6 x 9 = | 6 x 6 = | 6 x 8 = |
| 6 x 9 = | 6 x 7 = | 6 x 6 = | 6 x 8 = |

multiply by 6 (6-10)



Lesson 8: Find the area of a rectangle through multiplication of the side lengths.

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Multiply.

| 7 x 1 = | 7 x 2 = | 7 x 3 = | 7 x 4 = |
|---------|----------|---------|----------|
| 7 x 5 = | 7 x 6 = | 7 x 7 = | 7 x 8 = |
| 7 x 9 = | 7 x 10 = | 7 x 5 = | 7 x 6 = |
| 7 x 5 = | 7 x 7 = | 7 x 5 = | 7 x 8 = |
| 7 x 5 = | 7 x 9 = | 7 x 5 = | 7 x 10 = |
| 7 x 6 = | 7 x 5 = | 7 x 6 = | 7 x 7 = |
| 7 x 6 = | 7 x 8 = | 7 x 6 = | 7 x 9 = |
| 7 x 6 = | 7 x 7 = | 7 x 6 = | 7 x 7 = |
| 7 x 8 = | 7 x 7 = | 7 x 9 = | 7 x 7 = |
| 7 x 8 = | 7 x 6 = | 7 x 8 = | 7 x 7 = |
| 7 x 8 = | 7 x 9 = | 7 x 9 = | 7 x 6 = |
| 7 x 9 = | 7 x 7 = | 7 x 9 = | 7 x 8 = |
| 7 x 9 = | 7 x 8 = | 7 x 6 = | 7 x 9 = |
| 7 x 7 = | 7 x 9 = | 7 x 6 = | 7 x 8 = |
| 7 x 9 = | 7 x 7 = | 7 x 6 = | 7 x 8 = |

multiply by 7 (6–10)



Lesson 12: Solve word problems involving area.

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Find areas by decomposing into rectangles or completing composite figures to form rectangles.

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multiply by 8 (6–10)



Multiply.

| 8 | x | 1 | = | 8 | x | 2 | = | 8 | x | 3 | = | 8 | x | 4 | = | |
|---|---|---|---|-------|---|----|---|-------|---|---|---|-------|---|----|---|--|
| 8 | х | 5 | = | 8 | x | 6 | = | 8 | x | 7 | = | 8 | x | 8 | = | |
| 8 | х | 9 | = | 8 | x | 10 | = | 8 | x | 5 | = | 8 | x | 6 | = | |
| 8 | x | 5 | = | 8 | x | 7 | = | 8 | x | 5 | = | 8 | x | 8 | = | |
| 8 | x | 5 | = | 8 | x | 9 | = | 8 | x | 5 | = | 8 | x | 10 | = | |
| 8 | х | 6 | = | 8 | x | 5 | = | 8 | x | 6 | = | 8 | x | 7 | = | |
| 8 | х | 6 | = | 8 | x | 8 | = | 8 | х | 6 | = | 8 | x | 9 | = | |
| 8 | х | 6 | = | 8 | x | 7 | = | 8 | x | 6 | = | 8 | x | 7 | = | |
| 8 | х | 8 | = | 8 | x | 7 | = | 8 | x | 9 | = | 8 | x | 7 | = | |
| 8 | x | 8 | = | 8 | x | 6 | = | 8 | x | 8 | = | 8 | x | 7 | = | |
| 8 | х | 8 | = | 8 | x | 9 | = | 8 | х | 9 | = | 8 | x | 6 | = | |
| 8 | x | 9 | = | 8 | x | 7 | = | 8 | x | 9 | = | 8 | x | 8 | = | |
| 8 | х | 9 | = | 8 | x | 8 | = | 8 | x | 6 | = | 8 | x | 9 | = | |
| 8 | x | 7 | = | 8 | x | 9 | = | 8 | x | 6 | = | 8 | x | 8 | = | |
| 8 | x | 9 | = | 8 | x | 7 | = | 8 | x | 6 | = | 8 | x | 8 | = | |

Lesson 14 Pattern Sheet 3•4

Lesson 14:



MATH

multiply by 9 (1-5)

Apply knowledge of area to determine areas of rooms in a given floor

54

plan.

| 9 | х | 2 | = | 9 | х | 1 | = | 9 | х | 2 | = | 9 | х | 3 | = |
|---|---|---|---|-------|---|---|---|-------|---|---|---|-------|---|---|---|
| 9 | x | 1 | = | 9 | x | 3 | = | 9 | х | 2 | = | 9 | х | 3 | = |
| 9 | x | 4 | = | 9 | x | 3 | = | 9 | x | 5 | = | 9 | x | 3 | = |
| 9 | х | 4 | = | 9 | x | 1 | = | 9 | х | 4 | = | 9 | х | 2 | = |
| 9 | x | 4 | = | 9 | x | 3 | = | 9 | x | 4 | = | 9 | x | 5 | = |
| 9 | х | 4 | = | 9 | х | 5 | = | 9 | х | 1 | = | 9 | х | 5 | = |
| 9 | x | 2 | = | 9 | x | 5 | = | 9 | х | 3 | = | 9 | x | 5 | = |
| 9 | х | 4 | = | 9 | х | 2 | = | 9 | х | 4 | = | 9 | х | 3 | = |
| 9 | x | 5 | = | 9 | x | 3 | = | 9 | х | 2 | = | 9 | x | 4 | = |
| 9 | х | 3 | = | 9 | x | 5 | = | 9 | x | 2 | = | 9 | x | 4 | = |

Multiply.

9 x 1 = _____

9 x 5 = _____

9 x 5 = ____

9 x 3 =

9 x 4 =

9 x 1 =

9 x 5 =

9 x 3 = ____

9 x 1 = _____

9 x 3 = ____

9 x 2 = _____

9 x 2 =

9 x 2 =

9 x 4 =

9 x 2 = ____

9 x 1 = _____

9 x 1 = _____

9 x 1 =

9 x 2 = 9 x 4 =



MATH

Multiply.

9

9 x 9 =

9 x 7 =

9 x 9 =

multiply by 9 (6-10)

EUREKA

| 9 | х | 1 | = | 9 x | 2 | = | 9 | х | 3 | = | 9 | x | 4 | = | |
|---|---|---|---|-----|----|---|---|---|---|---|-------|---|----|---|--|
| 9 | x | 5 | = | 9 x | 6 | = | 9 | x | 7 | = | 9 | x | 8 | = | |
| 9 | x | 9 | = | 9 x | 10 | = | 9 | x | 5 | = | 9 | x | 6 | = | |
| 9 | x | 5 | = | 9 x | 7 | = | 9 | x | 5 | = | 9 | x | 8 | = | |
| 9 | x | 5 | = | 9 x | 9 | = | 9 | x | 5 | = | 9 | x | 10 | = | |
| 9 | x | 6 | = | 9 x | 5 | = | 9 | x | 6 | = | 9 | x | 7 | = | |
| 9 | х | 6 | = | 9 x | 8 | = | 9 | x | 6 | = | 9 | x | 9 | = | |
| 9 | x | 6 | = | 9 x | 7 | = | 9 | x | 6 | = | 9 | x | 7 | = | |
| 9 | х | 8 | = | 9 x | 7 | = | 9 | x | 9 | = | 9 | x | 7 | = | |
| 9 | x | 8 | = | 9 x | 6 | = | 9 | x | 8 | = | 9 | x | 7 | = | |
| 9 | х | 8 | = | 9 x | 9 | = | 9 | х | 9 | = | 9 | x | 6 | = | |

9 x 9 = _____ 9 x 7 = _____ 9 x 9 = _

9 x 8 =

9 x 7 =

plan.

9 x 9 = _____

Lesson 16:

Lesson 16 Pattern Sheet 3•4

9 x 8 = _

9 x 9 =

9 x 8 = _

21



Apply knowledge of area to determine areas of rooms in a given floor

9 x 6 = ___

9 x 6 = _____

9 x 6 = 9 x 8 =

| Α | Multiply | | | : | # Correct |
|----|----------|---|----|----------|-----------|
| 1 | 1 x 6 = | 2 | 23 | 10 x 6 = | |
| 2 | 6 x 1 = | 2 | 24 | 9 x 6 = | |
| 3 | 2 x 6 = | 2 | 25 | 4 x 6 = | |
| 4 | 6 x 2 = | 2 | 26 | 8 x 6 = | |
| 5 | 3 x 6 = | 2 | 27 | 6 x 3 = | |
| 6 | 6 x 3 = | 2 | 28 | 7 x 6 = | |
| 7 | 4 x 6 = | 2 | 29 | 6 x 6 = | |
| 8 | 6 x 4 = | 3 | 30 | 6 x 10 = | |
| 9 | 5 x 6 = | 3 | 31 | 6 x 5 = | |
| 10 | 6 x 5 = | 3 | 32 | 6 x 4 = | |
| 11 | 6 x 6 = | 3 | 33 | 6 x 1 = | |
| 12 | 7 x 6 = | 3 | 34 | 6 x 9 = | |
| 13 | 6 x 7 = | 3 | 35 | 6 x 6 = | |
| 14 | 8 x 6 = | 3 | 36 | 6 x 3 = | |
| 15 | 6 x 8 = | 3 | 37 | 6 x 2 = | |
| 16 | 9 x 6 = | 3 | 38 | 6 x 7 = | |
| 17 | 6 x 9 = | 3 | 39 | 6 x 8 = | |
| 18 | 10 x 6 = | 4 | 10 | 11 x 6 = | |
| 19 | 6 x 10 = | 4 | 11 | 6 x 11 = | |
| 20 | 6 x 3 = | 4 | 12 | 12 x 6 = | |
| 21 | 1 x 6 = | 4 | 13 | 6 x 12 = | |
| 22 | 2 x 6 = | 4 | 14 | 13 x 6 = | |





Lesson 3:

Specify and partition a whole into equal parts, identifying and counting unit fractions by drawing pictorial area models.

| В | Multiply. | Improvemer | nt | # Correct |
|----|-----------|------------|----------|-----------|
| 1 | 6 x 1 = | 23 | 9 x 6 = | |
| 2 | 1 x 6 = | 24 | 3 x 6 = | |
| 3 | 6 x 2 = | 25 | 8 x 6 = | |
| 4 | 2 x 6 = | 26 | 4 x 6 = | |
| 5 | 6 x 3 = | 27 | 7 x 6 = | |
| 6 | 3 x 6 = | 28 | 5 x 6 = | |
| 7 | 6 x 4 = | 29 | 6 x 6 = | |
| 8 | 4 x 6 = | 30 | 6 x 5 = | |
| 9 | 6 x 5 = | 31 | 6 x 10 = | |
| 10 | 5 x 6 = | 32 | 6 x 1 = | |
| 11 | 6 x 6 = | 33 | 6 x 6 = | |
| 12 | 6 x 7 = | 34 | 6 x 4 = | |
| 13 | 7 x 6 = | 35 | 6 x 9 = | |
| 14 | 6 x 8 = | 36 | 6 x 2 = | |
| 15 | 8 x 6 = | 37 | 6 x 7 = | |
| 16 | 6 x 9 = | 38 | 6 x 3 = | |
| 17 | 9 x 6 = | 39 | 6 x 8 = | |
| 18 | 6 x 10 = | 40 | 11 x 6 = | |
| 19 | 10 x 6 = | 41 | 6 x 11 = | |
| 20 | 1 x 6 = | 42 | 12 x 6 = | |
| 21 | 10 x 6 = | 43 | 6 x 12 = | |
| 22 | 2 x 6 = | 44 | 13 x 6 = | |



Lesson 3:

Specify and partition a whole into equal parts, identifying and counting unit fractions by drawing pictorial area models.

Α

Correct _____

| | Multiply or divide. | | | |
|----|---------------------|------|----------|--|
| 1 | 2 x 6 = | 23 | x 6 = 60 | |
| 2 | 3 x 6 = | 24 | x 6 =12 | |
| 3 | 4 x 6 = | 25 | x 6 = 18 | |
| 4 | 5 x 6 = | 26 | 60 ÷ 6 = | |
| 5 | 1 x 6 = | 27 | 30 ÷ 6 = | |
| 6 | 12 ÷ 6 = | 28 | 6 ÷ 6 = | |
| 7 | 18 ÷ 6 = | 29 | 12 ÷ 6 = | |
| 8 | 30 ÷ 6 = | 30 | 18 ÷ 6 = | |
| 9 | 6 ÷ 6 = | 31 | x 6 = 36 | |
| 10 | 24 ÷ 6 = | 32 | x 6 = 42 | |
| 11 | 6 x 6 = | 33 | x 6 = 54 | |
| 12 | 7 x 6 = | 34 | x 6 = 48 | |
| 13 | 8 x 6 = | 35 | 42 ÷ 6 = | |
| 14 | 9 x 6 = | 36 | 54 ÷ 6 = | |
| 15 | 10 x 6 = | 37 | 36 ÷ 6 = | |
| 16 | 48 ÷ 6 = | 38 | 48 ÷ 6 = | |
| 17 | 42 ÷ 6 = | 39 | 11 x 6 = | |
| 18 | 54 ÷ 6 = | 40 | 66 ÷ 6 = | |
| 19 | 36 ÷ 6 = | 41 | 12 x 6 = | |
| 20 | 60 ÷ 6 = | 42 | 72 ÷ 6 = | |
| 21 | x 6 = 30 | 43 | 14 x 6 = | |
| 22 | x6 = 6 | 44 | 84 ÷ 6 = | |



Lesson 4: Represent and identify fractional parts of different wholes.

| В | Multiply or divide. | Improvemer | nt | # Correct |
|----|---------------------|------------|----------|-----------|
| 1 | 1 x 6 = | 23 | x 6 = 12 | |
| 2 | 2 x 6 = | 24 | x 6 = 60 | |
| 3 | 3 x 6 = | 25 | x 6 = 18 | |
| 4 | 4 x 6 = | 26 | 12 ÷ 6 = | |
| 5 | 5 x 6 = | 27 | 6 ÷ 6 = | |
| 6 | 18 ÷ 6 = | 28 | 60 ÷ 6 = | |
| 7 | 12 ÷ 6 = | 29 | 30 ÷ 6 = | |
| 8 | 24 ÷ 6 = | 30 | 18 ÷ 6 = | |
| 9 | 6 ÷ 6 = | 31 | x 6 = 18 | |
| 10 | 30 ÷ 6 = | 32 | x 6 = 24 | |
| 11 | 10 x 6 = | 33 | x 6 = 54 | |
| 12 | 6 x 6 = | 34 | x 6 = 42 | |
| 13 | 7 x 6 = | 35 | 48 ÷ 6 = | |
| 14 | 8 x 6 = | 36 | 54 ÷ 6 = | |
| 15 | 9 x 6 = | 37 | 36 ÷ 6 = | |
| 16 | 42 ÷ 6 = | 38 | 42 ÷ 6 = | |
| 17 | 36 ÷ 6 = | 39 | 11 x 6 = | |
| 18 | 48 ÷ 6 = | 40 | 66 ÷ 6 = | |
| 19 | 60 ÷ 6 = | 41 | 12 x 6 = | |
| 20 | 54 ÷ 6 = | 42 | 72 ÷ 6 = | |
| 21 | x 6 = 6 | 43 | 13 x 6 = | |
| 22 | x 6 = 30 | 44 | 78 ÷ 6 = | |



: Represent and identify fractional parts of different wholes.

| A | Multiply. | | | |
|----|-----------|----|----------|--|
| 1 | 1 x 7 = | 23 | 10 x 7 = | |
| 2 | 7 x 1 = | 24 | 9 x 7 = | |
| 3 | 2 x 7 = | 25 | 4 x 7 = | |
| 4 | 7 x 2 = | 26 | 8 x 7 = | |
| 5 | 3 x 7 = | 27 | 7 x 3 = | |
| 6 | 7 x 3 = | 28 | 7 x 7 = | |
| 7 | 4 x 7 = | 29 | 6 x 7 = | |
| 8 | 7 x 4 = | 30 | 7 x 10 = | |
| 9 | 5 x 7 = | 31 | 7 x 5 = | |
| 10 | 7 x 5 = | 32 | 7 x 6 = | |
| 11 | 6 x 7 = | 33 | 7 x 1 = | |
| 12 | 7 x 6 = | 34 | 7 x 9 = | |
| 13 | 7 x 7 = | 35 | 7 x 4 = | |
| 14 | 8 x 7 = | 36 | 7 x 3 = | |
| 15 | 7 x 8 = | 37 | 7 x 2 = | |
| 16 | 9 x 7 = | 38 | 7 x 7 = | |
| 17 | 7 x 9 = | 39 | 7 x 8 = | |
| 18 | 10 x 7 = | 40 | 11 x 7 = | |
| 19 | 7 x 10 = | 41 | 7 x 11 = | |
| 20 | 7 x 3 = | 42 | 12 x 7 = | |
| 21 | 1 x 7 = | 43 | 7 x 12 = | |
| 22 | 2 x 7 = | 44 | 13 x 7 = | |





Build non-unit fractions less than one whole from unit fractions.

| В | Multiply. | Improvemer | nt | # Correct |
|----|-----------|------------|----------|-----------|
| 1 | 7 x 1 = | 23 | 9 x 7 = | |
| 2 | 1 x 7 = | 24 | 3 x 7 = | |
| 3 | 7 x 2 = | 25 | 8 x 7 = | |
| 4 | 2 x 7 = | 26 | 4 x 7 = | |
| 5 | 7 x 3 = | 27 | 7 x 7 = | |
| 6 | 3 x 7 = | 28 | 5 x 7 = | |
| 7 | 7 x 4 = | 29 | 6 x 7 = | |
| 8 | 4 x 7 = | 30 | 7 x 5 = | |
| 9 | 7 x 5 = | 31 | 7 x 10 = | |
| 10 | 5 x 7 = | 32 | 7 x 1 = | |
| 11 | 7 x 6 = | 33 | 7 x 6 = | |
| 12 | 6 x 7 = | 34 | 7 x 4 = | |
| 13 | 7 x 7 = | 35 | 7 x 9 = | |
| 14 | 7 x 8 = | 36 | 7 x 2 = | |
| 15 | 8 x 7 = | 37 | 7 x 7 = | |
| 16 | 7 x 9 = | 38 | 7 x 3 = | |
| 17 | 9 x 7 = | 39 | 7 x 8 = | |
| 18 | 7 x 10 = | 40 | 11 x 7 = | |
| 19 | 10 x 7 = | 41 | 7 x 11 = | |
| 20 | 1 x 7 = | 42 | 12 x 7 = | |
| 21 | 10 x 7 = | 43 | 7 x 12 = | |
| 22 | 2 x 7 = | 44 | 13 x 7 = | |



Lesson 6:

Build non-unit fractions less than one whole from unit fractions.

| Α | | | | ; | # Correct |
|----|---------------------|---|----|----------|-----------|
| 1 | Multiply or divide. | | 23 | × 7 – 70 | |
| - | 2 × 7 = | | 23 | <u> </u> | |
| 2 | 3 x 7 = | 2 | 24 | X 7 = 14 | |
| 3 | 4 x 7 = | 2 | 25 | x 7 = 21 | |
| 4 | 5 x 7 = | 2 | 26 | 70 ÷ 7 = | |
| 5 | 1 x 7 = | 2 | 27 | 35 ÷ 7 = | |
| 6 | 14 ÷ 7 = | 2 | 28 | 7 ÷ 7 = | |
| 7 | 21 ÷ 7 = | 2 | 29 | 14 ÷ 7 = | |
| 8 | 35 ÷ 7 = | 3 | 30 | 21 ÷ 7 = | |
| 9 | 7 ÷ 7 = | 3 | 31 | x 7 = 42 | |
| 10 | 28 ÷ 7 = | 3 | 32 | x 7 = 49 | |
| 11 | 6 x 7 = | 3 | 33 | x 7 = 63 | |
| 12 | 7 x 7 = | 3 | 34 | x 7 = 56 | |
| 13 | 8 x 7 = | 3 | 35 | 49 ÷ 7 = | |
| 14 | 9 x 7 = | 3 | 36 | 63 ÷ 7 = | |
| 15 | 10 x 7 = | 3 | 37 | 42 ÷ 7 = | |
| 16 | 56 ÷ 7 = | 3 | 38 | 56 ÷ 7 = | |
| 17 | 49 ÷ 7 = | 3 | 39 | 11 x 7 = | |
| 18 | 63 ÷ 7 = | 4 | 40 | 77 ÷ 7 = | |
| 19 | 42 ÷ 7 = | 4 | 41 | 12 x 7 = | |
| 20 | 70 ÷ 7 = | 4 | 42 | 84 ÷ 7 = | |
| 21 | x 7 = 35 | 4 | 43 | 14 x 7 = | |
| 22 | x 7 = 7 | 4 | 44 | 98 ÷ 7 = | |



Lesson 7:

Identify and represent shaded and non-shaded parts of one whole as fractions.

| В | Multiply or divide. | Improvemer | nt | # Correct |
|----|---------------------|------------|----------|-----------|
| 1 | 1 x 7 = | 23 | x 7 = 14 | |
| 2 | 2 x 7 = | 24 | x 7 = 70 | |
| 3 | 3 x 7 = | 25 | x 7 = 21 | |
| 4 | 4 x 7 = | 26 | 14 ÷ 7 = | |
| 5 | 5 x 7 = | 27 | 7 ÷ 7 = | |
| 6 | 21 ÷ 7 = | 28 | 70 ÷ 7 = | |
| 7 | 14 ÷ 7 = | 29 | 35 ÷ 7 = | |
| 8 | 28 ÷ 7 = | 30 | 21 ÷ 7 = | |
| 9 | 7 ÷ 7 = | 31 | x 7 = 21 | |
| 10 | 35 ÷ 7 = | 32 | x 7 = 28 | |
| 11 | 10 x 7 = | 33 | x 7 = 63 | |
| 12 | 6 x 7 = | 34 | x 7 = 49 | |
| 13 | 7 x 7 = | 35 | 56 ÷ 7 = | |
| 14 | 8 x 7 = | 36 | 63 ÷ 7 = | |
| 15 | 9 x 7 = | 37 | 42 ÷ 7 = | |
| 16 | 49 ÷ 7 = | 38 | 49 ÷ 7 = | |
| 17 | 42 ÷ 7 = | 39 | 11 x 7 = | |
| 18 | 56 ÷ 7 = | 40 | 77 ÷ 7 = | |
| 19 | 70 ÷ 7 = | 41 | 12 x 7 = | |
| 20 | 63 ÷ 7 = | 42 | 84 ÷ 7 = | |
| 21 | x 7 = 7 | 43 | 13 x 7 = | |
| 22 | x 7 = 35 | 44 | 91 ÷ 7 = | |



| A | Vrite the fraction that is shaded | | | # C | orrect |
|----|-----------------------------------|---|----|---------------------|--------|
| 1 | | / | 23 | \oplus | / |
| 2 | \bigcirc | / | 24 | $\overline{\Phi}$ | / |
| 3 | | / | 25 | $\overline{\oplus}$ | / |
| 4 | \bigcirc | / | 26 | | / |
| 5 | \bigcirc | / | 27 | | / |
| 6 | | / | 28 | \bigotimes | / |
| 7 | \bigcirc | / | 29 | | / |
| 8 | \bigcirc | / | 30 | \bigotimes | / |
| 9 | | / | 31 | | / |
| 10 | \ominus | / | 32 | \bigotimes | / |
| 11 | | / | 33 | | / |
| 12 | | / | 34 | \bigotimes | / |
| 13 | | / | 35 | | / |
| 14 | | / | 36 | | / |
| 15 | | / | 37 | | / |
| 16 | | / | 38 | | / |
| 17 | | / | 39 | | / |
| 18 | \oplus | / | 40 | | / |
| 19 | \oplus | / | 41 | | / |
| 20 | \oplus | / | 42 | | / |
| 21 | \oplus | / | 43 | \bigotimes | / |
| 22 | \oplus | / | 44 | \bigotimes | / |





Lesson 8:

Represent parts of one whole as fractions with number bonds.

| В | | Improveme | nt | # Co | orrect |
|---------|-------------------------|-----------|----|--------------|--------|
| Write t | he fraction that is sha | ded. | | | |
| 1 | \bigcirc | / | 23 | $-\Theta$ | / |
| 2 | | / | 24 | \oplus | / |
| 3 | | / | 25 | \oplus | / |
| 4 | \ominus | / | 26 | | / |
| 5 | \bigcirc | / | 27 | | / |
| 6 | | / | 28 | | / |
| 7 | \square | / | 29 | \otimes | / |
| 8 | \bigcirc | / | 30 | | / |
| 9 | | / | 31 | \bigotimes | / |
| 10 | \bigcirc | / | 32 | | / |
| 11 | | / | 33 | \otimes | / |
| 12 | | / | 34 | | / |
| 13 | | / | 35 | \bigotimes | / |
| 14 | | / | 36 | | / |
| 15 | | / | 37 | | / |
| 16 | | / | 38 | | / |
| 17 | | / | 39 | | / |
| 18 | \oplus | / | 40 | | / |
| 19 | \oplus | / | 41 | | / |
| 20 | \oplus | / | 42 | | / |
| 21 | \oplus | / | 43 | \bigotimes | / |
| 22 | \oplus | / | 44 | \otimes | / |



Lesson 8:

Represent parts of one whole as fractions with number bonds.

| Α | Multiply | | | # Correct |
|----|----------|----|----------|-----------|
| 1 | 8 x 1 = | 23 | 9 x 8 = | |
| 2 | 1 x 8 = | 24 | 3 x 8 = | |
| 3 | 8 x 2 = | 25 | 8 x 8 = | |
| 4 | 2 x 8 = | 26 | 4 x 8 = | |
| 5 | 8 x 3 = | 27 | 7 x 8 = | |
| 6 | 3 x 8 = | 28 | 5 x 8 = | |
| 7 | 8 x 4 = | 29 | 6 x 8 = | |
| 8 | 4 x 8 = | 30 | 8 x 5 = | |
| 9 | 8 x 5 = | 31 | 8 x 10 = | |
| 10 | 5 x 8 = | 32 | 8 x 1 = | |
| 11 | 8 x 6 = | 33 | 8 x 6 = | |
| 12 | 6 x 8 = | 34 | 8 x 4 = | |
| 13 | 8 x 7 = | 35 | 8 x 9 = | |
| 14 | 7 x 8 = | 36 | 8 x 2 = | |
| 15 | 8 x 8 = | 37 | 8 x 7 = | |
| 16 | 8 x 9 = | 38 | 8 x 3 = | |
| 17 | 9 x 8 = | 39 | 8 x 8 = | |
| 18 | 8 x 10 = | 40 | 11 x 8 = | |
| 19 | 10 x 8 = | 41 | 8 x 11 = | |
| 20 | 1 x 8 = | 42 | 12 x 8 = | |
| 21 | 10 x 8 = | 43 | 8 x 12 = | |
| 22 | 2 x 8 = | 44 | 13 x 8 = | |





Build and write fractions greater than one whole using unit fractions. Lesson 9:

| В | Multiply | Improveme | nt | # Correct |
|----|----------|-----------|----------|-----------|
| 1 | 1 x 8 = | 23 | 10 x 8 = | |
| 2 | 8 x 1 = | 24 | 9 x 8 = | |
| 3 | 2 x 8 = | 25 | 4 x 8 = | |
| 4 | 8 x 2 = | 26 | 8 x 8 = | |
| 5 | 3 x 8 = | 27 | 8 x 3 = | |
| 6 | 8 x 3 = | 28 | 7 x 8 = | |
| 7 | 4 x 8 = | 29 | 6 x 8 = | |
| 8 | 8 x 4 = | 30 | 8 x 10 = | |
| 9 | 5 x 8 = | 31 | 8 x 5 = | |
| 10 | 8 x 5 = | 32 | 8 x 6 = | |
| 11 | 6 x 8 = | 33 | 8 x 1 = | |
| 12 | 8 x 6 = | 34 | 8 x 9 = | |
| 13 | 7 x 8 = | 35 | 8 x 4 = | |
| 14 | 8 x 7 = | 36 | 8 x 3 = | |
| 15 | 8 x 8 = | 37 | 8 x 2 = | |
| 16 | 9 x 8 = | 38 | 8 x 7 = | |
| 17 | 8 x 9 = | 39 | 8 x 8 = | |
| 18 | 10 x 8 = | 40 | 11 x 8 = | |
| 19 | 8 x 10 = | 41 | 8 x 11 = | |
| 20 | 8 x 3 = | 42 | 12 x 8 = | |
| 21 | 1 x 8 = | 43 | 8 x 12 = | |
| 22 | 2 x 8 = | 44 | 13 x 8 = | |



Lesson 9: Build and write fractions greater than one whole using unit fractions.

| Α | Multiply or divido | | | ; | # Correct |
|----|--------------------|---|----|-----------|-----------|
| 1 | 2 x 8 = | 2 | 23 | x 8 = 80 | |
| 2 | 3 x 8 = | 2 | 24 | x 8 = 16 | |
| 3 | 4 x 8 = | 2 | 25 | x 8 = 24 | |
| 4 | 5 x 8 = | 2 | 26 | 80 ÷ 8 = | |
| 5 | 1 x 8 = | 2 | 27 | 40 ÷ 8 = | |
| 6 | 16 ÷ 8 = | 2 | 28 | 8 ÷ 8 = | |
| 7 | 24 ÷ 8 = | 2 | 29 | 16 ÷ 8 = | |
| 8 | 40 ÷ 8 = | 3 | 30 | 24 ÷ 8 = | |
| 9 | 8 ÷ 8 = | 3 | 31 | x 8 = 48 | |
| 10 | 32 ÷ 8 = | 3 | 32 | x 8 = 56 | |
| 11 | 6 x 8 = | 3 | 33 | x 8 = 72 | |
| 12 | 7 x 8 = | 3 | 34 | x 8 = 64 | |
| 13 | 8 x 8 = | 3 | 35 | 56 ÷ 8 = | |
| 14 | 9 x 8 = | 3 | 36 | 72 ÷ 8 = | |
| 15 | 10 x 8 = | 3 | 37 | 48 ÷ 8 = | |
| 16 | 64 ÷ 8 = | 3 | 38 | 64 ÷ 8 = | |
| 17 | 56 ÷ 8 = | 3 | 39 | 11 x 8 = | |
| 18 | 72 ÷ 8 = | 4 | 10 | 88 ÷ 8 = | |
| 19 | 48 ÷ 8 = | 4 | 11 | 12 x 8 = | |
| 20 | 80 ÷ 8 = | 4 | 12 | 96 ÷ 8 = | |
| 21 | x 8 = 40 | 4 | 13 | 14 x 8 = | |
| 22 | x 8 = 8 | 4 | 4 | 112 ÷ 8 = | |



Lesson 10:

Compare unit fractions by reasoning about their size using fraction strips.

| в | Multiply or divide. | Improveme | nt | # Correct |
|----|---------------------|-----------|-----------|-----------|
| 1 | 1 x 8 = | 23 | x 8 = 16 | |
| 2 | 2 x 8 = | 24 | x 8 = 80 | |
| 3 | 3 x 8 = | 25 | x 8 = 24 | |
| 4 | 4 x 8 = | 26 | 16 ÷ 8 = | |
| 5 | 5 x 8 = | 27 | 8 ÷ 8 = | |
| 6 | 24 ÷ 8 = | 28 | 80 ÷ 8 = | |
| 7 | 16 ÷ 8 = | 29 | 40 ÷ 8 = | |
| 8 | 32 ÷ 8 = | 30 | 24 ÷ 8 = | |
| 9 | 8 ÷ 8 = | 31 | x 8 = 24 | |
| 10 | 40 ÷ 8 = | 32 | x 8 = 32 | |
| 11 | 10 x 8 = | 33 | x 8 = 72 | |
| 12 | 6 x 8 = | 34 | x 8 = 56 | |
| 13 | 7 x 8 = | 35 | 64 ÷ 8 = | |
| 14 | 8 x 8 = | 36 | 72 ÷8 = | |
| 15 | 9 x 8 = | 37 | 48 ÷ 8 = | |
| 16 | 56 ÷ 8 = | 38 | 56 ÷ 8 = | |
| 17 | 48 ÷ 8 = | 39 | 11 x 8 = | |
| 18 | 64 ÷ 8 = | 40 | 88 ÷ 8 = | |
| 19 | 80 ÷ 8 = | 41 | 12 x 8 = | |
| 20 | 72 ÷8 = | 42 | 96 ÷ 8 = | |
| 21 | x 8 = 8 | 43 | 13 x 8 = | |
| 22 | x 8 = 40 | 44 | 104 ÷ 8 = | |



Compare unit fractions by reasoning about their size using fraction strips.

| Α | | | | : | # Correct |
|----|-----------|----|---|----------|-----------|
| | Multiply. | | Т | | |
| 1 | 9 x 1 = | 23 | 3 | 9 x 9 = | |
| 2 | 1 x 9 = | 24 | 1 | 3 x 9 = | |
| 3 | 9 x 2 = | 25 | 5 | 8 x 9 = | |
| 4 | 2 x 9 = | 26 | 3 | 4 x 9 = | |
| 5 | 9 x 3 = | 27 | 7 | 7 x 9 = | |
| 6 | 3 x 9 = | 28 | 3 | 5 x 9 = | |
| 7 | 9 x 4 = | 29 | 9 | 6 x 9 = | |
| 8 | 4 x 9 = | 30 | b | 9 x 5 = | |
| 9 | 9 x 5 = | 31 | 1 | 9 x 10 = | |
| 10 | 5 x 9 = | 32 | 2 | 9 x 1 = | |
| 11 | 9 x 6 = | 33 | 3 | 9 x 6 = | |
| 12 | 6 x 9 = | 34 | 1 | 9 x 4 = | |
| 13 | 9 x 7 = | 35 | 5 | 9 x 9 = | |
| 14 | 7 x 9 = | 36 | 3 | 9 x 2 = | |
| 15 | 9 x 8 = | 37 | 7 | 9 x 7 = | |
| 16 | 8 x 9 = | 38 | 3 | 9 x 3 = | |
| 17 | 9 x 9 = | 39 | 9 | 9 x 8 = | |
| 18 | 9 x 10 = | 40 | 2 | 11 x 9 = | |
| 19 | 10 x 9 = | 41 | 1 | 9 x 11 = | |
| 20 | 1 x 9 = | 42 | 2 | 12 x 9 = | |
| 21 | 10 x 9 = | 43 | 3 | 9 x 12 = | |
| 22 | 2 x 9 = | 44 | 1 | 13 x 9 = | |



Lesson 12: Specify the corresponding whole when presented with one equal part.

| В | Multiply. | Improvemer | nt | # Correct |
|----|-----------|------------|----------|-----------|
| 1 | 1 x 9 = | 23 | 10 x 9 = | |
| 2 | 9 x 1 = | 24 | 9 x 9 = | |
| 3 | 2 x 9 = | 25 | 4 x 9 = | |
| 4 | 9 x 2 = | 26 | 8 x 9 = | |
| 5 | 3 x 9 = | 27 | 3 x 9 = | |
| 6 | 9 x 3 = | 28 | 7 x 9 = | |
| 7 | 4 x 9 = | 29 | 6 x 9 = | |
| 8 | 9 x 4 = | 30 | 9 x 10 = | |
| 9 | 5 x 9 = | 31 | 9 x 5 = | |
| 10 | 9 x 5 = | 32 | 9 x 6 = | |
| 11 | 6 x 9 = | 33 | 9 x 1 = | |
| 12 | 9 x 6 = | 34 | 9 x 9 = | |
| 13 | 7 x 9 = | 35 | 9 x 4 = | |
| 14 | 9 x 7 = | 36 | 9 x 3 = | |
| 15 | 8 x 9 = | 37 | 9 x 2 = | |
| 16 | 9 x 8 = | 38 | 9 x 7 = | |
| 17 | 9 x 9 = | 39 | 9 x 8 = | |
| 18 | 10 x 9 = | 40 | 11 x 9 = | |
| 19 | 9 x 10 = | 41 | 9 x 11 = | |
| 20 | 9 x 3 = | 42 | 12 x 9 = | |
| 21 | 1 x 9 = | 43 | 9 x 12 = | |
| 22 | 2 x 9 = | 44 | 13 x 9 = | |



Lesson 12: Specify the corresponding whole when presented with one equal part.

| • | |
|---|--|
| 4 | |
| | |

Multiply or divide.

| # | Correct |
|---|---------|
|---|---------|

| | multiply of unde. | | | |
|----|-------------------|----|-----------|--|
| 1 | 2 x 9 = | 23 | x 9 = 90 | |
| 2 | 3 x 9 = | 24 | x 9 = 18 | |
| 3 | 4 x 9 = | 25 | x 9 = 27 | |
| 4 | 5 x 9 = | 26 | 90 ÷ 9 = | |
| 5 | 1 x 9 = | 27 | 45 ÷ 9 = | |
| 6 | 18 ÷ 9 = | 28 | 9 ÷ 9 = | |
| 7 | 27 ÷ 9 = | 29 | 18 ÷ 9 = | |
| 8 | 45 ÷ 9 = | 30 | 27 ÷ 9 = | |
| 9 | 9 ÷ 9 = | 31 | x 9 = 54 | |
| 10 | 36 ÷ 9 = | 32 | x 9 = 63 | |
| 11 | 6 x 9 = | 33 | x 9 = 81 | |
| 12 | 7 x 9 = | 34 | x 9 = 72 | |
| 13 | 8 x 9 = | 35 | 63 ÷ 9 = | |
| 14 | 9 x 9 = | 36 | 81 ÷ 9 = | |
| 15 | 10 x 9 = | 37 | 54 ÷ 9 = | |
| 16 | 72 ÷ 9 = | 38 | 72 ÷ 9 = | |
| 17 | 63 ÷ 9 = | 39 | 11 x 9 = | |
| 18 | 81 ÷ 9 = | 40 | 99 ÷ 9 = | |
| 19 | 54 ÷ 9 = | 41 | 12 x 9 = | |
| 20 | 90 ÷ 9 = | 42 | 108 ÷ 9 = | |
| 21 | x 9 = 45 | 43 | 14 x 9 = | |
| 22 | x 9 = 9 | 44 | 126 ÷ 9 = | |



Lesson 16:

Place whole number fractions and fractions between whole numbers on the number line.
| В | Multiply or divide. | Improvemer | nt | # Correct |
|----|---------------------|------------|-----------|-----------|
| 1 | 1 x 9 = | 23 | x 9 = 18 | |
| 2 | 2 x 9 = | 24 | x 9 = 90 | |
| 3 | 3 x 9 = | 25 | x 9 = 27 | |
| 4 | 4 x 9 = | 26 | 18 ÷ 9 = | |
| 5 | 5 x 9 = | 27 | 9 ÷ 9 = | |
| 6 | 27 ÷ 9 = | 28 | 90 ÷ 9 = | |
| 7 | 18 ÷ 9 = | 29 | 45 ÷ 9 = | |
| 8 | 36 ÷ 9 = | 30 | 27 ÷ 9 = | |
| 9 | 9 ÷ 9 = | 31 | x 9 = 27 | |
| 10 | 45 ÷ 9 = | 32 | x 9 = 36 | |
| 11 | 10 x 9 = | 33 | x 9 = 81 | |
| 12 | 6 x 9 = | 34 | x 9 = 63 | |
| 13 | 7 x 9 = | 35 | 72 ÷ 9 = | |
| 14 | 8 x 9 = | 36 | 81 ÷ 9 = | |
| 15 | 9 x 9 = | 37 | 54 ÷ 9 = | |
| 16 | 63 ÷ 9 = | 38 | 63 ÷ 9 = | |
| 17 | 54 ÷ 9 = | 39 | 11 x 9 = | |
| 18 | 72 ÷ 9 = | 40 | 99 ÷ 9 = | |
| 19 | 90 ÷ 9 = | 41 | 12 x 9 = | |
| 20 | 81 ÷ 9 = | 42 | 108 ÷ 9 = | |
| 21 | x 9 = 9 | 43 | 13 x 9 = | |
| 22 | x 9 = 45 | 44 | 117 ÷ 9 = | |



Lesson 16:

Place whole number fractions and fractions between whole numbers on the number line.

| Α | Divide | | | : | # Correct |
|----|-----------|----|---|-----------|-----------|
| 1 | 3 ÷ 3 = | 23 | 3 | 24 ÷ 3 = | |
| 2 | 4 ÷ 4 = | 24 | 4 | 16 ÷ 2 = | |
| 3 | 5 ÷ 5 = | 25 | 5 | 30 ÷ 10 = | |
| 4 | 19 ÷ 19 = | 26 | 6 | 30 ÷ 3 = | |
| 5 | 0 ÷ 1 = | 27 | 7 | 27 ÷ 3 = | |
| 6 | 0 ÷ 2 = | 28 | 8 | 18 ÷ 2 = | |
| 7 | 0 ÷ 3 = | 29 | 9 | 40 ÷ 10 = | |
| 8 | 0 ÷ 19 = | 30 | 0 | 40 ÷ 4 = | |
| 9 | 6 ÷ 3 = | 32 | 1 | 20 ÷ 4 = | |
| 10 | 9 ÷ 3 = | 32 | 2 | 20 ÷ 5 = | |
| 11 | 12 ÷ 3 = | 33 | 3 | 24 ÷ 4 = | |
| 12 | 15 ÷ 3 = | 34 | 4 | 30 ÷ 5 = | |
| 13 | 4 ÷ 2 = | 35 | 5 | 28 ÷ 4 = | |
| 14 | 6 ÷ 2 = | 36 | 6 | 40 ÷ 5 = | |
| 15 | 8 ÷ 2 = | 37 | 7 | 32 ÷ 4 = | |
| 16 | 10 ÷ 2 = | 38 | 8 | 45 ÷ 5 = | |
| 17 | 18 ÷ 3 = | 39 | 9 | 44 ÷ 4 = | |
| 18 | 12 ÷ 2 = | 40 | 0 | 36 ÷ 4 = | |
| 19 | 21 ÷ 3 = | 4 | 1 | 48 ÷ 6 = | |
| 20 | 14 ÷ 2 = | 42 | 2 | 63 ÷ 7 = | |
| 21 | 20 ÷ 10 = | 43 | 3 | 64 ÷ 8 = | |
| 22 | 20 ÷ 2 = | 44 | 4 | 72 ÷ 9 = | |



Lesson 17: Practice placing various fractions on the number line.

| В | Divide. | Improvemen | t | # Correct |
|----|-----------|------------|-----------|-----------|
| 1 | 2 ÷ 2 = | 23 | 16 ÷ 2 = | |
| 2 | 3 ÷ 3 = | 24 | 24 ÷ 3 = | |
| 3 | 4 ÷ 4 = | 25 | 30 ÷ 3 = | |
| 4 | 17 ÷ 17 = | 26 | 30 ÷ 10 = | |
| 5 | 0 ÷ 2 = | 27 | 18 ÷ 2 = | |
| 6 | 0 ÷ 3 = | 28 | 27 ÷ 3 = | |
| 7 | 0 ÷ 4 = | 29 | 40 ÷ 4 = | |
| 8 | 0 ÷ 17 = | 30 | 40 ÷ 10 = | |
| 9 | 4 ÷ 2 = | 31 | 20 ÷ 5 = | |
| 10 | 6 ÷ 2 = | 32 | 20 ÷ 4 = | |
| 11 | 8 ÷ 2 = | 33 | 30 ÷ 5 = | |
| 12 | 10 ÷ 2 = | 34 | 24 ÷ 4 = | |
| 13 | 6 ÷ 3 = | 35 | 40 ÷ 5 = | |
| 14 | 9 ÷ 3 = | 36 | 28 ÷ 4 = | |
| 15 | 12 ÷ 3 = | 37 | 45 ÷ 5 = | |
| 16 | 15 ÷ 3 = | 38 | 32 ÷ 4 = | |
| 17 | 12 ÷ 2 = | 39 | 55 ÷ 5 = | |
| 18 | 18 ÷ 3 = | 40 | 36 ÷ 4 = | |
| 19 | 14 ÷ 2 = | 41 | 54 ÷ 6 = | |
| 20 | 21 ÷ 3 = | 42 | 56 ÷ 7 = | |
| 21 | 20 ÷ 2 = | 43 | 72 ÷ 8 = | |
| 22 | 20 ÷ 10 = | 44 | 63 ÷ 9 = | |



Practice placing various fractions on the number line. Lesson 17:

Correct _____

| | write each fraction as a whole | number. | | | |
|----|--------------------------------|---------|----|-------------------|--|
| 1 | $\frac{2}{1} =$ | : | 23 | $\frac{6}{3} =$ | |
| 2 | $\frac{2}{2} =$ | : | 24 | $\frac{3}{3} =$ | |
| 3 | $\frac{4}{2} =$ | : | 25 | $\frac{3}{1} =$ | |
| 4 | $\frac{6}{2} =$ | : | 26 | $\frac{9}{3} =$ | |
| 5 | $\frac{10}{2} =$ | : | 27 | $\frac{16}{4} =$ | |
| 6 | $\frac{8}{2} =$ | : | 28 | $\frac{20}{4} =$ | |
| 7 | $\frac{5}{1} =$ | : | 29 | $\frac{12}{3} =$ | |
| 8 | $\frac{5}{5}$ = | : | 30 | $\frac{15}{3} =$ | |
| 9 | $\frac{10}{5} =$ | : | 31 | $\frac{70}{10} =$ | |
| 10 | $\frac{15}{5} =$ | : | 32 | $\frac{12}{2} =$ | |
| 11 | $\frac{25}{5} =$ | : | 33 | $\frac{14}{2} =$ | |
| 12 | $\frac{20}{5} =$ | : | 34 | $\frac{90}{10} =$ | |
| 13 | $\frac{10}{10} =$ | : | 35 | $\frac{30}{5} =$ | |
| 14 | $\frac{50}{10} =$ | : | 36 | $\frac{35}{5} =$ | |
| 15 | $\frac{30}{10} =$ | : | 37 | $\frac{60}{10} =$ | |
| 16 | $\frac{10}{1} =$ | : | 38 | $\frac{18}{2} =$ | |
| 17 | $\frac{20}{10} =$ | : | 39 | $\frac{40}{5} =$ | |
| 18 | $\frac{40}{10} =$ | | 40 | $\frac{80}{10} =$ | |
| 19 | $\frac{8}{4} =$ | | 41 | $\frac{16}{2} =$ | |
| 20 | $\frac{4}{4} =$ | | 42 | $\frac{45}{5} =$ | |
| 21 | $\frac{4}{1} =$ | | 43 | $\frac{27}{3} =$ | |
| 22 | $\frac{12}{4} =$ | | 44 | $\frac{32}{4} =$ | |

Α

Write each fraction as a whole number



Understand distance and position on the number line as strategies for comparing fractions. (Optional)

| в | Write each fraction as a whole number | Improvement | # Co | rrect |
|----|---------------------------------------|-------------|-------------------|-------|
| 1 | $\frac{5}{1} =$ | 23 | $\frac{8}{4} =$ | |
| 2 | $\frac{5}{5}$ = | 24 | $\frac{4}{4} =$ | |
| 3 | $\frac{10}{5} =$ | 25 | $\frac{4}{1} =$ | |
| 4 | $\frac{15}{5} =$ | 26 | $\frac{12}{4} =$ | |
| 5 | $\frac{25}{5} =$ | 27 | $\frac{12}{3} =$ | |
| 6 | $\frac{20}{5} =$ | 28 | $\frac{15}{3} =$ | |
| 7 | $\frac{2}{1} =$ | 29 | $\frac{16}{4} =$ | |
| 8 | $\frac{2}{2} =$ | 30 | $\frac{20}{4} =$ | |
| 9 | $\frac{4}{2} =$ | 31 | $\frac{90}{10} =$ | |
| 10 | $\frac{6}{2} =$ | 32 | $\frac{30}{5} =$ | |
| 11 | $\frac{10}{2} =$ | 33 | $\frac{35}{5} =$ | |
| 12 | $\frac{8}{2}$ = | 34 | $\frac{70}{10} =$ | |
| 13 | $\frac{10}{1} =$ | 35 | $\frac{12}{2} =$ | |
| 14 | $\frac{10}{10} =$ | 36 | $\frac{14}{2} =$ | |
| 15 | $\frac{50}{10} =$ | 37 | $\frac{80}{10} =$ | |
| 16 | $\frac{30}{10} =$ | 38 | $\frac{45}{5} =$ | |
| 17 | $\frac{20}{10} =$ | 39 | $\frac{16}{2} =$ | |
| 18 | $\frac{40}{10} =$ | 40 | $\frac{60}{10} =$ | |
| 19 | $\frac{6}{3} =$ | 41 | $\frac{18}{2} =$ | |
| 20 | $\frac{3}{3} =$ | 42 | $\frac{40}{5} =$ | |
| 21 | $\frac{3}{1} =$ | 43 | $\frac{36}{4} =$ | |
| 22 | $\frac{9}{3} =$ | 44 | $\frac{24}{3} =$ | |



Lesson 19:

Understand distance and position on the number line as strategies for comparing fractions. (Optional)

| 7 x 1 = | 7 x 2 = | 7 x 3 = | 7 x 4 = |
|---------|---------|---------|---------|
| 7 x 5 = | 7 x 1 = | 7 x 2 = | 7 x 1 = |
| 7 x 3 = | 7 x 1 = | 7 x 4 = | 7 x 1 = |
| 7 x 5 = | 7 x 1 = | 7 x 2 = | 7 x 3 = |
| 7 x 2 = | 7 x 4 = | 7 x 2 = | 7 x 5 = |
| 7 x 2 = | 7 x 1 = | 7 x 2 = | 7 x 3 = |
| 7 x 1 = | 7 x 3 = | 7 x 2 = | 7 x 3 = |
| 7 x 4 = | 7 x 3 = | 7 x 5 = | 7 x 3 = |
| 7 x 4 = | 7 x 1 = | 7 x 4 = | 7 x 2 = |
| 7 x 4 = | 7 x 3 = | 7 x 4 = | 7 x 5 = |
| 7 x 4 = | 7 x 5 = | 7 x 1 = | 7 x 5 = |
| 7 x 2 = | 7 x 5 = | 7 x 3 = | 7 x 5 = |
| 7 x 4 = | 7 x 2 = | 7 x 4 = | 7 x 3 = |
| 7 x 5 = | 7 x 3 = | 7 x 2 = | 7 x 4 = |
| 7 x 3 = | 7 x 5 = | 7 x 2 = | 7 x 4 = |

multiply by 7 (1–5)



Lesson 20:

Recognize and show that equivalent fractions have the same size, though not necessarily the same shape.

| | Add. | | | |
|----|----------|----|----------|--|
| 1 | 0 + 6 = | 23 | 7 + 6 = | |
| 2 | 1 + 6 = | 24 | 17 + 6 = | |
| 3 | 2 + 6 = | 25 | 27 + 6 = | |
| 4 | 3 + 6 = | 26 | 37 + 6 = | |
| 5 | 4 + 6 = | 27 | 47 + 6 = | |
| 6 | 6 + 4 = | 28 | 77 + 6 = | |
| 7 | 6 + 3 = | 29 | 8 + 6 = | |
| 8 | 6 + 2 = | 30 | 18 + 6 = | |
| 9 | 6 + 1 = | 31 | 28 + 6 = | |
| 10 | 6 + 0 = | 32 | 38 + 6 = | |
| 11 | 15 + 6 = | 33 | 48 + 6 = | |
| 12 | 25 + 6 = | 34 | 78 + 6 = | |
| 13 | 35 + 6 = | 35 | 9 + 6 = | |
| 14 | 45 + 6 = | 36 | 19 + 6 = | |
| 15 | 55 + 6 = | 37 | 29 + 6 = | |
| 16 | 85 + 6 = | 38 | 39 + 6 = | |
| 17 | 6 + 6 = | 39 | 89 + 6 = | |
| 18 | 16 + 6 = | 40 | 6 + 75 = | |
| 19 | 26 + 6 = | 41 | 6 + 56 = | |
| 20 | 36 + 6 = | 42 | 6 + 77 = | |
| 21 | 46 + 6 = | 43 | 6 + 88 = | |
| 22 | 76 + 6 = | 44 | 6 + 99 = | |



Α

Correct _____



Lesson 23:

Generate simple equivalent fractions by using visual fraction models and the number line.

| В | Add. | Improvemen | nt # | Correct |
|----|----------|------------|----------|---------|
| 1 | 6 + 0 = | 23 | 7 + 6 = | |
| 2 | 6 + 1 = | 24 | 17 + 6 = | |
| 3 | 6 + 2 = | 25 | 27 + 6 = | |
| 4 | 6 + 3 = | 26 | 37 + 6 = | |
| 5 | 6 + 4 = | 27 | 47 + 6 = | |
| 6 | 4 + 6 = | 28 | 67 + 6 = | |
| 7 | 3 + 6 = | 29 | 8 + 6 = | |
| 8 | 2 + 6 = | 30 | 18 + 6 = | |
| 9 | 1 + 6 = | 31 | 28 + 6 = | |
| 10 | 0 + 6 = | 32 | 38 + 6 = | |
| 11 | 5 + 6 = | 33 | 48 + 6 = | |
| 12 | 15 + 6 = | 34 | 88 + 6 = | |
| 13 | 25 + 6 = | 35 | 9 + 6 = | |
| 14 | 35 + 6 = | 36 | 19 + 6 = | |
| 15 | 45 + 6 = | 37 | 29 + 6 = | |
| 16 | 75 + 6 = | 38 | 39 + 6 = | |
| 17 | 6 + 6 = | 39 | 79 + 6 = | |
| 18 | 16 + 6 = | 40 | 6 + 55 = | |
| 19 | 26 + 6 = | 41 | 6 + 76 = | |
| 20 | 36 + 6 = | 42 | 6 + 57 = | |
| 21 | 46 + 6 = | 43 | 6 + 98 = | |
| 22 | 86 + 6 = | 44 | 6 + 89 = | |



Lesson 23:

Generate simple equivalent fractions by using visual fraction models and the number line.

| Α | Add. | | # | Correct |
|----|----------|----|----------|---------|
| 1 | 0 + 7 = | 23 | 6 + 7 = | |
| 2 | 1 + 7 = | 24 | 16 + 7 = | |
| 3 | 2 + 7 = | 25 | 26 + 7 = | |
| 4 | 3 + 7 = | 26 | 36 + 7 = | |
| 5 | 7 + 3 = | 27 | 46 + 7 = | |
| 6 | 7 + 2 = | 28 | 66 + 7 = | |
| 7 | 7 + 1 = | 29 | 7 + 7 = | |
| 8 | 7 + 0 = | 30 | 17 + 7 = | |
| 9 | 4 + 7 = | 31 | 27 + 7 = | |
| 10 | 14 + 7 = | 32 | 37 + 7 = | |
| 11 | 24 + 7 = | 33 | 87 + 7 = | |
| 12 | 34 + 7 = | 34 | 8 + 7 = | |
| 13 | 44 + 7 = | 35 | 18 + 7 = | |
| 14 | 84 + 7 = | 36 | 28 + 7 = | |
| 15 | 64 + 7 = | 37 | 38 + 7 = | |
| 16 | 5 + 7 = | 38 | 78 + 7 = | |
| 17 | 15 + 7 = | 39 | 9 + 7 = | |
| 18 | 25 + 7 = | 40 | 19 + 7 = | |
| 19 | 35 + 7 = | 41 | 29 + 7 = | |
| 20 | 45 + 7 = | 42 | 39 + 7 = | |
| 21 | 75 + 7 = | 43 | 49 + 7 = | |
| 22 | 55 + 7 = | 44 | 79 + 7 = | |





Lesson 24:

Express whole numbers as fractions and recognize equivalence with different units.

| В | Add. | Improvement | # Correct |
|----|----------|-------------|-----------|
| 1 | 7 + 0 = | 23 6 + 7 = | : |
| 2 | 7 + 1 = | 24 16 + 7 | = |
| 3 | 7 + 2 = | 25 26 + 7 | = |
| 4 | 7 + 3 = | 26 36 + 7 | = |
| 5 | 3 + 7 = | 27 46 + 7 | = |
| 6 | 2 + 7 = | 28 76 + 7 | = |
| 7 | 1 + 7 = | 29 7 + 7 = | : |
| 8 | 0 + 7 = | 30 17 + 7 = | = |
| 9 | 4 + 7 = | 31 27 + 7 | = |
| 10 | 14 + 7 = | 32 37 + 7 | = |
| 11 | 24 + 7 = | 33 67 + 7 = | = |
| 12 | 34 + 7 = | 34 8 + 7 = | : |
| 13 | 44 + 7 = | 35 18 + 7 = | = |
| 14 | 74 + 7 = | 36 28 + 7 | = |
| 15 | 54 + 7 = | 37 38 + 7 = | = |
| 16 | 5 + 7 = | 38 88 + 7 = | = |
| 17 | 15 + 7 = | 39 9 + 7 = | : |
| 18 | 25 + 7 = | 40 19 + 7 = | = |
| 19 | 35 + 7 = | 41 29 + 7 : | = |
| 20 | 45 + 7 = | 42 39 + 7 | = |
| 21 | 85 + 7 = | 43 49 + 7 | = |
| 22 | 65 + 7 = | 44 89 + 7 | = |



Lesson 24:

Express whole numbers as fractions and recognize equivalence with different units.

| Α | Subtract. | | # | Correct |
|----|-----------|----|----------|---------|
| 1 | 16 - 6 = | 23 | 23 - 6 = | |
| 2 | 6 - 6 = | 24 | 33 - 6 = | |
| 3 | 26 - 6 = | 25 | 63 - 6 = | |
| 4 | 7 - 6 = | 26 | 83 - 6 = | |
| 5 | 17 - 6 = | 27 | 14 - 6 = | |
| 6 | 37 - 6 = | 28 | 24 - 6 = | |
| 7 | 8 - 6 = | 29 | 34 - 6 = | |
| 8 | 18 - 6 = | 30 | 74 - 6 = | |
| 9 | 48 - 6 = | 31 | 54 - 6 = | |
| 10 | 9 - 6 = | 32 | 15 - 6 = | |
| 11 | 19 - 6 = | 33 | 25 - 6 = | |
| 12 | 59 - 6 = | 34 | 35 - 6 = | |
| 13 | 10 - 6 = | 35 | 85 - 6 = | |
| 14 | 20 - 6 = | 36 | 65 - 6 = | |
| 15 | 70 - 6 = | 37 | 90 - 6 = | |
| 16 | 11 - 6 = | 38 | 53 - 6 = | |
| 17 | 21 - 6 = | 39 | 42 - 6 = | |
| 18 | 81 - 6 = | 40 | 71 - 6 = | |
| 19 | 12 - 6 = | 41 | 74 - 6 = | |
| 20 | 22 - 6 = | 42 | 95 - 6 = | |
| 21 | 82 - 6 = | 43 | 51 - 6 = | |
| 22 | 13 - 6 = | 44 | 92 - 6 = | |





Lesson 25:

Express whole number fractions on the number line when the unit interval is 1.

| В | Subtract | Improvemen | t # | Correct |
|----|----------|------------|----------|---------|
| 1 | 6 - 6 = | 23 | 23 - 6 = | |
| 2 | 16 - 6 = | 24 | 33 - 6 = | |
| 3 | 26 - 6 = | 25 | 53 - 6 = | |
| 4 | 7 - 6 = | 26 | 73 - 6 = | |
| 5 | 17 - 6 = | 27 | 14 - 6 = | |
| 6 | 67 - 6 = | 28 | 24 - 6 = | |
| 7 | 8 - 6 = | 29 | 34 - 6 = | |
| 8 | 18 - 6 = | 30 | 64 - 6 = | |
| 9 | 78 - 6 = | 31 | 44 - 6 = | |
| 10 | 9 - 6 = | 32 | 15 - 6 = | |
| 11 | 19 - 6 = | 33 | 25 - 6 = | |
| 12 | 89 - 6 = | 34 | 35 - 6 = | |
| 13 | 10 - 6 = | 35 | 75 - 6 = | |
| 14 | 20 - 6 = | 36 | 55 - 6 = | |
| 15 | 90 - 6 = | 37 | 70 - 6 = | |
| 16 | 11 - 6 = | 38 | 63 - 6 = | |
| 17 | 21 - 6 = | 39 | 52 - 6 = | |
| 18 | 41 - 6 = | 40 | 81 - 6 = | |
| 19 | 12 - 6 = | 41 | 64 - 6 = | |
| 20 | 22 - 6 = | 42 | 85 - 6 = | |
| 21 | 42 - 6 = | 43 | 91 - 6 = | |
| 22 | 13 - 6 = | 44 | 52 - 6 = | |



Lesson 25:

Express whole number fractions on the number line when the unit interval is 1.

| Α | Add. | | # Correct |
|----|----------|----|------------|
| 1 | 0 + 8 = | 23 | 65 + 8 = |
| 2 | 1 + 8 = | 24 | 6 + 8 = |
| 3 | 2 + 8 = | 25 | 5 16 + 8 = |
| 4 | 8 + 2 = | 26 | 6 26 + 8 = |
| 5 | 1 + 8 = | 27 | 36 + 8 = |
| 6 | 0 + 8 = | 28 | 8 86 + 8 = |
| 7 | 3 + 8 = | 29 | 46 + 8 = |
| 8 | 13 + 8 = | 30 | 7 + 8 = |
| 9 | 23 + 8 = | 31 | 17 + 8 = |
| 10 | 33 + 8 = | 32 | 2 27 + 8 = |
| 11 | 43 + 8 = | 33 | 3 37 + 8 = |
| 12 | 83 + 8 = | 34 | 77 + 8 = |
| 13 | 4 + 8 = | 35 | 5 8 + 8 = |
| 14 | 14 + 8 = | 36 | 5 18 + 8 = |
| 15 | 24 + 8 = | 37 | 28 + 8 = |
| 16 | 34 + 8 = | 38 | 38 + 8 = |
| 17 | 44 + 8 = | 39 | 68 + 8 = |
| 18 | 74 + 8 = | 40 | 9 + 8 = |
| 19 | 5 + 8 = | 41 | 19 + 8 = |
| 20 | 15 + 8 = | 42 | 29 + 8 = |
| 21 | 25 + 8 = | 43 | 39 + 8 = |
| 22 | 35 + 8 = | 44 | 89 + 8 = |





Lesson 26:

Decompose whole number fractions greater than 1 using whole number equivalence with various models.

| В | Add. | Improvemer | nt | # Correct |
|----|----------|------------|----------|-----------|
| 1 | 8 + 0 = | 23 | 55 + 8 = | |
| 2 | 8 + 1 = | 24 | 6 + 8 = | |
| 3 | 8 + 2 = | 25 | 16 + 8 = | |
| 4 | 2 + 8 = | 26 | 26 + 8 = | |
| 5 | 1 + 8 = | 27 | 36 + 8 = | |
| 6 | 0 + 8 = | 28 | 66 + 8 = | |
| 7 | 3 + 8 = | 29 | 56 + 8 = | |
| 8 | 13 + 8 = | 30 | 7 + 8 = | |
| 9 | 23 + 8 = | 31 | 17 + 8 = | |
| 10 | 33 + 8 = | 32 | 27 + 8 = | |
| 11 | 43 + 8 = | 33 | 37 + 8 = | |
| 12 | 73 + 8 = | 34 | 67 + 8 = | |
| 13 | 4 + 8 = | 35 | 8 + 8 = | |
| 14 | 14 + 8 = | 36 | 18 + 8 = | |
| 15 | 24 + 8 = | 37 | 28 + 8 = | |
| 16 | 34 + 8 = | 38 | 38 + 8 = | |
| 17 | 44 + 8 = | 39 | 78 + 8 = | |
| 18 | 84 + 8 = | 40 | 9 + 8 = | |
| 19 | 5 + 8 = | 41 | 19 + 8 = | |
| 20 | 15 + 8 = | 42 | 29 + 8 = | |
| 21 | 25 + 8 = | 43 | 39 + 8 = | |
| 22 | 35 + 8 = | 44 | 89 + 8 = | |



Lesson 26:

Decompose whole number fractions greater than 1 using whole number equivalence with various models.

| Α | Subtract. | | # Correct | |
|----|-----------|----|------------|--|
| 1 | 17 - 7 = | 23 | 3 24 - 7 = | |
| 2 | 7 - 7 = | 24 | 4 34 - 7 = | |
| 3 | 27 - 7 = | 25 | 5 64 - 7 = | |
| 4 | 8 - 7 = | 26 | 6 84 - 7 = | |
| 5 | 18 - 7 = | 27 | 7 15 - 7 = | |
| 6 | 38 - 7 = | 28 | 8 25 - 7 = | |
| 7 | 9 - 7 = | 29 | 9 35 - 7 = | |
| 8 | 19 - 7 = | 30 | 0 75 - 7 = | |
| 9 | 49 - 7 = | 31 | 1 55 - 7 = | |
| 10 | 10 - 7 = | 32 | 2 16 - 7 = | |
| 11 | 20 - 7 = | 33 | 3 26 - 7 = | |
| 12 | 60 - 7 = | 34 | 4 36 - 7 = | |
| 13 | 11 - 7 = | 35 | 5 86 - 7 = | |
| 14 | 21 - 7 = | 36 | 6 66 - 7 = | |
| 15 | 71 - 7 = | 37 | 7 90 - 7 = | |
| 16 | 12 - 7 = | 38 | 8 53 - 7 = | |
| 17 | 22 - 7 = | 39 | 9 42 - 7 = | |
| 18 | 82 - 7 = | 40 | 0 71 - 7 = | |
| 19 | 13 - 7 = | 41 | 1 74 - 7 = | |
| 20 | 23 - 7 = | 42 | 2 56 - 7 = | |
| 21 | 83 - 7 = | 43 | 3 95 - 7 = | |
| 22 | 14 - 7 = | 44 | 4 92 - 7 = | |





Lesson 27:

size.

Explain equivalence by manipulating units and reasoning about their

| В | Subtract. | Improvement | # Correct |
|----|-----------|-------------|-----------|
| 1 | 7 - 7 = | 23 2 | 24 - 7 = |
| 2 | 17 - 7 = | 24 3 | 34 - 7 = |
| 3 | 27 - 7 = | 25 5 | 54 - 7 = |
| 4 | 8 - 7 = | 26 7 | 74 - 7 = |
| 5 | 18 - 7 = | 27 1 | 5 - 7 = |
| 6 | 68 - 7 = | 28 2 | 25 - 7 = |
| 7 | 9 - 7 = | 29 3 | 35 - 7 = |
| 8 | 19 - 7 = | 30 6 | 65 - 7 = |
| 9 | 79 - 7 = | 31 4 | 5 - 7 = |
| 10 | 10 - 7 = | 32 1 | 6 - 7 = |
| 11 | 20 - 7 = | 33 2 | 26 - 7 = |
| 12 | 90 - 7 = | 34 3 | 36 - 7 = |
| 13 | 11 - 7 = | 35 7 | 76 - 7 = |
| 14 | 21 - 7 = | 36 5 | 56 - 7 = |
| 15 | 91 - 7 = | 37 7 | 70 - 7 = |
| 16 | 12 - 7 = | 38 6 | 63 - 7 = |
| 17 | 22 - 7 = | 39 5 | 52 - 7 = |
| 18 | 42 - 7 = | 40 8 | 31 - 7 = |
| 19 | 13 - 7 = | 41 7 | 74 - 7 = |
| 20 | 23 - 7 = | 42 6 | 66 - 7 = |
| 21 | 43 - 7 = | 43 8 | 85 - 7 = |
| 22 | 14 - 7 = | 44 5 | 52 - 7 = |



Explain equivalence by manipulating units and reasoning about their

size.

| Α | Subtract. | | | # | Correct |
|----|-----------|----|---|----------|---------|
| 1 | 18 - 8 = | 23 | ; | 74 - 8 = | |
| 2 | 8 - 8 = | 24 | - | 15 - 8 = | |
| 3 | 28 - 8 = | 25 | ; | 25 - 8 = | |
| 4 | 9 - 8 = | 26 | ; | 35 - 8 = | |
| 5 | 19 - 8 = | 27 | , | 85 - 8 = | |
| 6 | 39 - 8 = | 28 | 3 | 65 - 8 = | |
| 7 | 10 - 8 = | 29 |) | 16 - 8 = | |
| 8 | 20 - 8 = | 30 |) | 26 - 8 = | |
| 9 | 50 - 8 = | 31 | | 36 - 8 = | |
| 10 | 11 - 8 = | 32 | 2 | 96 - 8 = | |
| 11 | 21 - 8 = | 33 | ; | 76 - 8 = | |
| 12 | 71 - 8 = | 34 | | 17 - 8 = | |
| 13 | 12 - 8 = | 35 | ; | 27 - 8 = | |
| 14 | 22 - 8 = | 36 | ; | 37 - 8 = | |
| 15 | 82 - 8 = | 37 | , | 87 - 8 = | |
| 16 | 13 - 8 = | 38 | 3 | 67 - 8 = | |
| 17 | 23 - 8 = | 39 |) | 70 - 8 = | |
| 18 | 83 - 8 = | 40 |) | 62 - 8 = | |
| 19 | 14 - 8 = | 41 | | 84 - 8 = | |
| 20 | 24 - 8 = | 42 | 2 | 66 - 8 = | |
| 21 | 34 - 8 = | 43 | ; | 91 - 8 = | |
| 22 | 54 - 8 = | 44 | - | 75 - 8 = | |



Compare fractions with the same numerator pictorially. Lesson 28:

| В | Subtract. | Improvemen | nt | # Correct |
|----|-----------|------------|----------|-----------|
| 1 | 8 - 8 = | 23 | 94 - 8 = | |
| 2 | 18 - 8 = | 24 | 15 - 8 = | |
| 3 | 28 - 8 = | 25 | 25 - 8 = | |
| 4 | 9 - 8 = | 26 | 35 - 8 = | |
| 5 | 19 - 8 = | 27 | 95 - 8 = | |
| 6 | 69 - 8 = | 28 | 75 - 8 = | |
| 7 | 10 - 8 = | 29 | 16 - 8 = | |
| 8 | 20 - 8 = | 30 | 26 - 8 = | |
| 9 | 60 - 8 = | 31 | 36 - 8 = | |
| 10 | 11 - 8 = | 32 | 66 - 8 = | |
| 11 | 21 - 8 = | 33 | 46 - 8 = | |
| 12 | 81 - 8 = | 34 | 17 - 8 = | |
| 13 | 12 - 8 = | 35 | 27 - 8 = | |
| 14 | 22 - 8 = | 36 | 37 - 8 = | |
| 15 | 52 - 8 = | 37 | 97 - 8 = | |
| 16 | 13 - 8 = | 38 | 77 - 8 = | |
| 17 | 23 - 8 = | 39 | 80 - 8 = | |
| 18 | 93 - 8 = | 40 | 71 - 8 = | |
| 19 | 14 - 8 = | 41 | 53 - 8 = | |
| 20 | 24 - 8 = | 42 | 45 - 8 = | |
| 21 | 34 - 8 = | 43 | 87 - 8 = | |
| 22 | 74 - 8 = | 44 | 54 - 8 = | |



Lesson 28: Compare fractions with the same numerator pictorially.

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MATH

multiply by 8 (1-5)

EUREKA Lesson 29

| 9: | Compare fractions with the same numerator using <, >, or =, and use |
|----|---|
| | a model to reason about their size. |

91

| Multiply. | |
|-----------|---|
| 8 v 1 = | , |

| 8 | x | 1 | = | ;t | 8 | x | 2 | = | 8 | x | 3 | = | • | 8 | x | 4 | = | |
|---|---|---|---|---------------------------------------|---|---|----|---|-------|---|---|---|---------|---|---|----|---|---------|
| 8 | x | 5 | = | a n 1927 - 199 - 1 9 | 8 | x | 6 | = | 8 | x | 7 | = | | 8 | x | 8 | = | |
| 8 | x | 9 | = | | 8 | x | 10 | = | 8 | x | 5 | = | | 8 | x | 6 | = | |
| 8 | x | 5 | = | | 8 | x | 7 | = | 8 | x | 5 | = | | 8 | x | 8 | = | |
| 8 | x | 5 | = | | 8 | x | 9 | = | 8 | x | 5 | = | | 8 | x | 10 | = | |
| 8 | x | 6 | = | | 8 | x | 5 | = | 8 | x | 6 | = | | 8 | x | 7 | = | <u></u> |
| 8 | x | 6 | = | <u> </u> | 8 | x | 8 | = | 8 | x | 6 | = | | 8 | x | 9 | = | |
| 8 | x | 6 | = | | 8 | x | 7 | = | 8 | x | 6 | = | | 8 | x | 7 | = | |
| 8 | x | 8 | = | · · · · · · · · · · · · · · · · · · · | 8 | x | 7 | = | 8 | x | 9 | = | | 8 | x | 7 | = | |
| 8 | x | 8 | = | | 8 | x | 6 | = | 8 | x | 8 | = | | 8 | x | 7 | = | |
| 8 | x | 8 | = | . <u> </u> | 8 | x | 9 | = | 8 | x | 9 | = | | 8 | x | 6 | = | |
| 8 | x | 9 | = | | 8 | x | 7 | = | 8 | x | 9 | = | | 8 | x | 8 | = | |
| 8 | x | 9 | = | <u> </u> | 8 | x | 8 | = | 8 | x | 6 | = | <u></u> | 8 | x | 9 | = | |
| 8 | x | 7 | = | | 8 | x | 9 | = | 8 | x | 6 | = | · | 8 | x | 8 | = | |
| 8 | x | 9 | = | | 8 | x | 7 | = | 8 | x | 6 | = | | 8 | x | 8 | = | |

Lesson 29 Pattern Sheet 3-5

| 9 x 1 = | 9 x 2 = | 9 x 3 = | 9 x 4 = |
|---------|---------|---------|---------|
| 9 x 5 = | 9 x 1 = | 9 x 2 = | 9 x 1 = |
| 9 x 3 = | 9 x 1 = | 9 x 4 = | 9 x 1 = |
| 9 x 5 = | 9 x 1 = | 9 x 2 = | 9 x 3 = |
| 9 x 2 = | 9 x 4 = | 9 x 2 = | 9 x 5 = |
| 9 x 2 = | 9 x 1 = | 9 x 2 = | 9 x 3 = |
| 9 x 1 = | 9 x 3 = | 9 x 2 = | 9 x 3 = |
| 9 x 4 = | 9 x 3 = | 9 x 5 = | 9 x 3 = |
| 9 x 4 = | 9 x 1 = | 9 x 4 = | 9 x 2 = |
| 9 x 4 = | 9 x 3 = | 9 x 4 = | 9 x 5 = |
| 9 x 4 = | 9 x 5 = | 9 x 1 = | 9 x 5 = |
| 9 x 2 = | 9 x 5 = | 9 x 3 = | 9 x 5 = |
| 9 x 4 = | 9 x 2 = | 9 x 4 = | 9 x 3 = |
| 9 x 5 = | 9 x 3 = | 9 x 2 = | 9 x 4 = |
| 9 x 3 = | 9 x 5 = | 9 x 2 = | 9 x 4 = |

multiply by 9 (1-5)



Lesson 30:

Partition various wholes precisely into equal parts using a number line method.

Number Correct: _____

A

П

Multiply or Divide by 6

| 1. | 2 × 6 = | |
|-----|----------|--|
| 2. | 3 × 6 = | |
| 3. | 4 × 6 = | |
| 4. | 5 × 6 = | |
| 5. | 1 × 6 = | |
| 6. | 12 ÷ 6 = | |
| 7. | 18 ÷ 6 = | |
| 8. | 30 ÷ 6 = | |
| 9. | 6 ÷ 6 = | |
| 10. | 24 ÷ 6 = | |
| 11. | 6 × 6 = | |
| 12. | 7 × 6 = | |
| 13. | 8 × 6 = | |
| 14. | 9 × 6 = | |
| 15. | 10 × 6 = | |
| 16. | 48 ÷ 6 = | |
| 17. | 42 ÷ 6 = | |
| 18. | 54 ÷ 6 = | |
| 19. | 36 ÷ 6 = | |
| 20. | 60 ÷ 6 = | |
| 21. | × 6 = 30 | |
| 22. | ×6=6 | |

| 23. | × 6 = 60 | |
|-----|----------|--|
| 24. | × 6 = 12 | |
| 25. | × 6 = 18 | |
| 26. | 60 ÷ 6 = | |
| 27. | 30 ÷ 6 = | |
| 28. | 6 ÷ 6 = | |
| 29. | 12 ÷ 6 = | |
| 30. | 18 ÷ 6 = | |
| 31. | × 6 = 36 | |
| 32. | ×6=42 | |
| 33. | ×6=54 | |
| 34. | × 6 = 48 | |
| 35. | 42 ÷ 6 = | |
| 36. | 54 ÷ 6 = | |
| 37. | 36 ÷ 6 = | |
| 38. | 48 ÷ 6 = | |
| 39. | 11 × 6 = | |
| 40. | 66 ÷ 6 = | |
| 41. | 12 × 6 = | |
| 42. | 72 ÷ 6 = | |
| 43. | 14 × 6 = | |
| 44. | 84 ÷ 6 = | |



Lesson 3: Create scaled bar graphs.

٦

Т

Multiply or Divide by 6

B

Number Correct: _____

Improvement: _____

| 1. | 1 × 6 = | |
|-----|----------|--|
| 2. | 2 × 6 = | |
| 3. | 3 × 6 = | |
| 4. | 4 × 6 = | |
| 5. | 5 × 6 = | |
| 6. | 18 ÷ 6 = | |
| 7. | 12 ÷ 6 = | |
| 8. | 24 ÷ 6 = | |
| 9. | 6 ÷ 6 = | |
| 10. | 30 ÷ 6 = | |
| 11. | 10 × 6 = | |
| 12. | 6 × 6 = | |
| 13. | 7 × 6 = | |
| 14. | 8 × 6 = | |
| 15. | 9 × 6 = | |
| 16. | 42 ÷ 6 = | |
| 17. | 36 ÷ 6 = | |
| 18. | 48 ÷ 6 = | |
| 19. | 60 ÷ 6 = | |
| 20. | 54 ÷ 6 = | |
| 21. | × 6 = 6 | |
| 22. | × 6 = 30 | |
| | | |

| 23. | ×6 = 12 | |
|-----|----------|--|
| 24. | × 6 = 60 | |
| 25. | × 6 = 18 | |
| 26. | 12 ÷ 6 = | |
| 27. | 6 ÷ 6 = | |
| 28. | 60 ÷ 6 = | |
| 29. | 30 ÷ 6 = | |
| 30. | 18 ÷ 6 = | |
| 31. | × 6 = 18 | |
| 32. | ×6 = 24 | |
| 33. | ×6 = 54 | |
| 34. | ×6=42 | |
| 35. | 48 ÷ 6 = | |
| 36. | 54 ÷ 6 = | |
| 37. | 36 ÷ 6 = | |
| 38. | 42 ÷ 6 = | |
| 39. | 11 × 6 = | |
| 40. | 66 ÷ 6 = | |
| 41. | 12 × 6 = | |
| 42. | 72 ÷ 6 = | |
| 43. | 13 × 6 = | |
| 44. | 78 ÷ 6 = | |



Lesson 3: Create scaled bar graphs.

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A STORY OF UNITS

| Multiply | Mul | tip | ly. |
|----------|-----|-----|-----|
|----------|-----|-----|-----|

| 6 x 1 = | 6 | x 2 | = | 6 x | 3 | = | 6 | x 4 | 1 = | |
|---------|---|-----|---|-----|---|---|---|------------|-----|--|
| 6 x 5 = | 6 | x 1 | = | 6 x | 2 | = | 6 | x | L = | |
| 6 x 3 = | 6 | x 1 | = | 6 x | 4 | = | 6 | x : | L = | |
| 6 x 5 = | 6 | x 1 | = | 6 x | 2 | = | 6 | x | 3 = | |
| 6 x 2 = | 6 | x 4 | = | 6 x | 2 | = | 6 | x ! | 5 = | |
| 6 x 2 = | 6 | x 1 | = | 6 x | 2 | = | 6 | x | 3 = | |
| 6 x 1 = | 6 | х З | = | 6 x | 2 | = | 6 | x 3 | 3 = | |
| 6 x 4 = | 6 | x 3 | = | 6 x | 5 | = | 6 | x 3 | 3 = | |
| 6 x 4 = | 6 | x 1 | = | 6 x | 4 | = | 6 | x 2 | 2 = | |
| 6 x 4 = | 6 | х З | = | 6 x | 4 | = | 6 | x ! | 5 = | |
| 6 x 4 = | 6 | x 5 | = | 6 x | 1 | = | 6 | х ! | 5 = | |
| 6 x 2 = | 6 | x 5 | = | 6 x | 3 | = | 6 | х ! | 5 = | |
| 6 x 4 = | 6 | x 2 | = | 6 x | 4 | = | 6 | x 3 | 3 = | |
| 6 x 5 = | 6 | x 3 | = | 6 x | 2 | = | 6 | X 4 | 1 = | |
| 6 x 3 = | 6 | x 5 | = | 6 x | 2 | = | 6 | x 4 | 1 = | |

multiply by 6 (1–5)

EUREKA MATH Lesson 6: Interpret measurement data from various line plots.

95

A STORY OF UNITS

Lesson 7 Pattern Sheet 3•6

Multiply

| waterpry. | | | |
|-----------|----------|---------|----------|
| 6 x 1 = | 6 x 2 = | 6 x 3 = | 6 x 4 = |
| 6 x 5 = | 6 x 6 = | 6 x 7 = | 6 x 8 = |
| 6 x 9 = | 6 x 10 = | 6 x 5 = | 6 x 6 = |
| 6 x 5 = | 6 x 7 = | 6 x 5 = | 6 x 8 = |
| 6 x 5 = | 6 x 9 = | 6 x 5 = | 6 x 10 = |
| 6 x 6 = | 6 x 5 = | 6 x 6 = | 6 x 7 = |
| 6 x 6 = | 6 x 8 = | 6 x 6 = | 6 x 9 = |
| 6 x 6 = | 6 x 7 = | 6 x 6 = | 6 x 7 = |
| 6 x 8 = | 6 x 7 = | 6 x 9 = | 6 x 7 = |
| 6 x 8 = | 6 x 6 = | 6 x 8 = | 6 x 7 = |
| 6 x 8 = | 6 x 9 = | 6 x 9 = | 6 x 6 = |
| 6 x 9 = | 6 x 7 = | 6 x 9 = | 6 x 8 = |
| 6 x 9 = | 6 x 8 = | 6 x 6 = | 6 x 9 = |
| 6 x 7 = | 6 x 9 = | 6 x 6 = | 6 x 8 = |
| 6 x 9 = | 6 x 7 = | 6 x 6 = | 6 x 8 = |

multiply by 6 (6–10)



Lesson 7: Represent measurement data with line plots.

multiply by 7 (1–5)

EUREKA

MATH

Lesson 8: Represent measurement data with line plots.

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| Α | STORY | OF | UNITS | |
|---|--------------|----|-------|--|

| Mι | ıltip | ly. | | | | | | | | | | | | |
|----|-------|-----|---|---|-----|---|---|-----|---|---|-----|------------|---|--|
| 7 | x | 1 | = | | 7 x | 2 | = | 7 x | 3 | = | 7 | × 4 | = | |
| 7 | x | 5 | = | | 7 x | 1 | = | 7 x | 2 | = | 7 | < 1 | = | |
| 7 | x | 3 | = | | 7 x | 1 | = | 7 x | 4 | = | 7 | < 1 | = | |
| 7 | x | 5 | = | | 7 x | 1 | = | 7 x | 2 | = | 7 | × 3 | = | |
| 7 | x | 2 | = | · | 7 x | 4 | = | 7 x | 2 | = | 7 : | x 5 | = | |
| 7 | x | 2 | = | | 7 x | 1 | = | 7 x | 2 | = | 7 | x 3 | = | |
| 7 | x | 1 | = | | 7 x | 3 | = | 7 x | 2 | = | 7 : | x 3 | = | |
| 7 | x | 4 | = | | 7 x | 3 | = | 7 x | 5 | = | 7 | κ 3 | = | |
| 7 | x | 4 | = | | 7 x | 1 | = | 7 x | 4 | = | 7 : | < 2 | = | |
| 7 | x | 4 | = | | 7 x | 3 | = | 7 x | 4 | = | 7 | < 5 | = | |
| 7 | x | 4 | = | | 7 x | 5 | = | 7 x | 1 | = | 7 | < 5 | = | |
| 7 | x | 2 | = | | 7 x | 5 | = | 7 x | 3 | = | 7 | < 5 | = | |
| 7 | x | 4 | = | | 7 x | 2 | = | 7 x | 4 | = | 7 | x 3 | = | |
| 7 | x | 5 | = | | 7 x | 3 | = | 7 x | 2 | = | 7 | x 4 | = | |
| 7 | x | 3 | = | | 7 x | 5 | = | 7 x | 2 | = | 7 : | x 4 | = | |

Lesson 8 Pattern Sheet 3•6

7 x 9 =

multiply by 7 (6–10)

EUREKA

MATH[®]

Analyze data to problem solve.

Lesson 9:

7 x 7 =

7 x 6 =

| Multiply. | | | |
|-----------|-----------|---------|----------|
| 7 x 1 = | 7 x 2 = | 7 x 3 = | 7 x 4 = |
| 7 x 5 = | 7 x 6 = | 7 x 7 = | 7 x 8 = |
| 7 x 9 = | 7 x 10 = | 7 x 5 = | 7 x 6 = |
| 7 x 5 = | 7 x 7 = | 7 x 5 = | 7 x 8 = |
| 7 x 5 = | 7 x 9 = | 7 x 5 = | 7 x 10 = |
| 7 x 6 = | 7 x 5 = | 7 x 6 = | 7 x 7 = |
| 7 x 6 = | 7 x 8 = | 7 x 6 = | 7 x 9 = |
| 7 x 6 = | 7 x 7 = | 7 x 6 = | 7 x 7 = |
| 7 x 8 = | 7 x 7 = | 7 x 9 = | 7 x 7 = |
| 7 x 8 = | 7 x 6 = | 7 x 8 = | 7 x 7 = |
| 7 x 8 = | 7 x 9 = | 7 x 9 = | 7 x 6 = |
| 7 x 9 = | 7 x 7 = | 7 x 9 = | 7 x 8 = |
| 7 x 9 = | 7 x 8 = | 7 x 6 = | 7 x 9 = |
| 7 x 7 = | _ 7 x 9 = | 7 x 6 = | 7 x 8 = |

A STORY OF UNITS

Lesson 9 Pattern Sheet 3-6

14

7 x 8 =

A STORY OF UNITS

Multiply.

| 3 x 1 = | 3 x 2 = | 3 x 3 = | 3 x 4 = |
|---------|---------|---------|---------|
| 3 x 5 = | 3 x 1 = | 3 x 2 = | 3 x 1 = |
| 3 x 3 = | 3 x 1 = | 3 x 4 = | 3 x 1 = |
| 3 x 5 = | 3 x 1 = | 3 x 2 = | 3 x 3 = |
| 3 x 2 = | 3 x 4 = | 3 x 2 = | 3 x 5 = |
| 3 x 2 = | 3 x 1 = | 3 x 2 = | 3 x 3 = |
| 3 x 1 = | 3 x 3 = | 3 x 2 = | 3 x 3 = |
| 3 x 4 = | 3 x 3 = | 3 x 5 = | 3 x 3 = |
| 3 x 4 = | 3 x 1 = | 3 x 4 = | 3 x 2 = |
| 3 x 4 = | 3 x 3 = | 3 x 4 = | 3 x 5 = |
| 3 x 4 = | 3 x 5 = | 3 x 1 = | 3 x 5 = |
| 3 x 2 = | 3 x 5 = | 3 x 3 = | 3 x 5 = |
| 3 x 4 = | 3 x 2 = | 3 x 4 = | 3 x 3 = |
| 3 x 5 = | 3 x 3 = | 3 x 2 = | 3 x 4 = |
| 3 x 3 = | 3 x 5 = | 3 x 2 = | 3 x 4 = |

multiply by 3 (1–5)



Lesson 1:

Solve word problems in varied contexts using a letter to represent the unknown.

Lesson 2 Pattern Sheet 3-7

Multiply.

| 3 x 1 = | 3 x 2 = | 3 x 3 = | 3 x 4 = |
|---------|----------|---------|----------|
| 3 x 5 = | 3 x 6 = | 3 x 7 = | 3 x 8 = |
| 3 x 9 = | 3 x 10 = | 3 x 5 = | 3 x 6 = |
| 3 x 5 = | 3 x 7 = | 3 x 5 = | 3 x 8 = |
| 3 x 5 = | 3 x 9 = | 3 x 5 = | 3 x 10 = |
| 3 x 6 = | 3 x 5 = | 3 x 6 = | 3 x 7 = |
| 3 x 6 = | 3 x 8 = | 3 x 6 = | 3 x 9 = |
| 3 x 6 = | 3 x 7 = | 3 x 6 = | 3 x 7 = |
| 3 x 8 = | 3 x 7 = | 3 x 9 = | 3 x 7 = |
| 3 x 8 = | 3 x 6 = | 3 x 8 = | 3 x 7 = |
| 3 x 8 = | 3 x 9 = | 3 x 9 = | 3 x 6 = |
| 3 x 9 = | 3 x 7 = | 3 x 9 = | 3 x 8 = |
| 3 x 9 = | 3 x 8 = | 3 x 6 = | 3 x 9 = |
| 3 x 7 = | 3 x 9 = | 3 x 6 = | 3 x 8 = |
| 3 x 9 = | 3 x 7 = | 3 x 6 = | 3 x 8 = |

multiply by 3 (6–10)

EUREKA MATH Solve word problems in varied contexts using a letter to represent the unknown.

| 4 x 1 = | 4 x 2 = | 4 x 3 = | 4 x 4 = |
|---------|---------|---------|---------|
| 4 x 5 = | 4 x 1 = | 4 x 2 = | 4 x 1 = |
| 4 x 3 = | 4 x 1 = | 4 x 4 = | 4 x 1 = |
| 4 x 5 = | 4 x 1 = | 4 x 2 = | 4 x 3 = |
| 4 x 2 = | 4 x 4 = | 4 x 2 = | 4 x 5 = |
| 4 x 2 = | 4 x 1 = | 4 x 2 = | 4 x 3 = |
| 4 x 1 = | 4 x 3 = | 4 x 2 = | 4 x 3 = |
| 4 x 4 = | 4 x 3 = | 4 x 5 = | 4 x 3 = |
| 4 x 4 = | 4 x 1 = | 4 x 4 = | 4 x 2 = |
| 4 x 4 = | 4 x 3 = | 4 x 4 = | 4 x 5 = |
| 4 x 4 = | 4 x 5 = | 4 x 1 = | 4 x 5 = |
| 4 x 2 = | 4 x 5 = | 4 x 3 = | 4 x 5 = |
| 4 x 4 = | 4 x 2 = | 4 x 4 = | 4 x 3 = |
| 4 x 5 = | 4 x 3 = | 4 x 2 = | 4 x 4 = |
| 4 x 3 = | 4 x 5 = | 4 x 2 = | 4 x 4 = |

multiply by 4 (1–5)

EUREKA MATH Lesson 3: Share and critique peer solution strategies to varied word problems.

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| 4 x 1 = | 4 x 2 = | 4 x 3 = | 4 x 4 = |
|---------|----------|---------|----------|
| 4 x 5 = | 4 x 6 = | 4 x 7 = | 4 x 8 = |
| 4 x 9 = | 4 x 10 = | 4 x 5 = | 4 x 6 = |
| 4 x 5 = | 4 x 7 = | 4 x 5 = | 4 x 8 = |
| 4 x 5 = | 4 x 9 = | 4 x 5 = | 4 x 10 = |
| 4 x 6 = | 4 x 5 = | 4 x 6 = | 4 x 7 = |
| 4 x 6 = | 4 x 8 = | 4 x 6 = | 4 x 9 = |
| 4 x 6 = | 4 x 7 = | 4 x 6 = | 4 x 7 = |
| 4 x 8 = | 4 x 7 = | 4 x 9 = | 4 x 7 = |
| 4 x 8 = | 4 x 6 = | 4 x 8 = | 4 x 7 = |
| 4 x 8 = | 4 x 9 = | 4 x 9 = | 4 x 6 = |
| 4 x 9 = | 4 x 7 = | 4 x 9 = | 4 x 8 = |
| 4 x 9 = | 4 x 8 = | 4 x 6 = | 4 x 9 = |
| 4 x 7 = | 4 x 9 = | 4 x 6 = | 4 x 8 = |
| 4 x 9 = | 4 x 7 = | 4 x 6 = | 4 x 8 = |

multiply by 4 (6–10)

Lesson 4: Compare and classify quadrilaterals.

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MATH

multiply by 5 (1-5)

Lesson 5: Compare and classify other polygons.

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Multiply.

| . , | | | |
|---------|---------|---------|---------|
| 5 x 1 = | 5 x 2 = | 5 x 3 = | 5 x 4 = |
| 5 x 5 = | 5 x 1 = | 5 x 2 = | 5 x 1 = |
| 5 x 3 = | 5 x 1 = | 5 x 4 = | 5 x 1 = |
| 5 x 5 = | 5 x 1 = | 5 x 2 = | 5 x 3 = |
| 5 x 2 = | 5 x 4 = | 5 x 2 = | 5 x 5 = |
| 5 x 2 = | 5 x 1 = | 5 x 2 = | 5 x 3 = |
| 5 x 1 = | 5 x 3 = | 5 x 2 = | 5 x 3 = |
| 5 x 4 = | 5 x 3 = | 5 x 5 = | 5 x 3 = |
| 5 x 4 = | 5 x 1 = | 5 x 4 = | 5 x 2 = |
| 5 x 4 = | 5 x 3 = | 5 x 4 = | 5 x 5 = |
| 5 x 4 = | 5 x 5 = | 5 x 1 = | 5 x 5 = |
| 5 x 2 = | 5 x 5 = | 5 x 3 = | 5 x 5 = |
| 5 x 4 = | 5 x 2 = | 5 x 4 = | 5 x 3 = |
| 5 x 5 = | 5 x 3 = | 5 x 2 = | 5 x 4 = |
| 5 x 3 = | 5 x 5 = | 5 x 2 = | 5 x 4 = |

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| 5 x 1 = | 5 x 2 = | 5 x 3 = | 5 x 4 = |
|---------|----------|---------|----------|
| 5 x 5 = | 5 x 6 = | 5 x 7 = | 5 x 8 = |
| 5 x 9 = | 5 x 10 = | 5 x 5 = | 5 x 6 = |
| 5 x 5 = | 5 x 7 = | 5 x 5 = | 5 x 8 = |
| 5 x 5 = | 5 x 9 = | 5 x 5 = | 5 x 10 = |
| 5 x 6 = | 5 x 5 = | 5 x 6 = | 5 x 7 = |
| 5 x 6 = | 5 x 8 = | 5 x 6 = | 5 x 9 = |
| 5 x 6 = | 5 x 7 = | 5 x 6 = | 5 x 7 = |
| 5 x 8 = | 5 x 7 = | 5 x 9 = | 5 x 7 = |
| 5 x 8 = | 5 x 6 = | 5 x 8 = | 5 x 7 = |
| 5 x 8 = | 5 x 9 = | 5 x 9 = | 5 x 6 = |
| 5 x 9 = | 5 x 7 = | 5 x 9 = | 5 x 8 = |
| 5 x 9 = | 5 x 8 = | 5 x 6 = | 5 x 9 = |
| 5 x 7 = | 5 x 9 = | 5 x 6 = | 5 x 8 = |
| 5 x 9 = | 5 x 7 = | 5 x 6 = | 5 x 8 = |

multiply by 5 (6-10)



Lesson 7:

Reason about composing and decomposing polygons using tetrominoes.

| 6 x 1 = | 6 x 2 = | 6 x 3 = | 6 x 4 = |
|---------|---------|---------|---------|
| 6 x 5 = | 6 x 1 = | 6 x 2 = | 6 x 1 = |
| 6 x 3 = | 6 x 1 = | 6 x 4 = | 6 x 1 = |
| 6 x 5 = | 6 x 1 = | 6 x 2 = | 6 x 3 = |
| 6 x 2 = | 6 x 4 = | 6 x 2 = | 6 x 5 = |
| 6 x 2 = | 6 x 1 = | 6 x 2 = | 6 x 3 = |
| 6 x 1 = | 6 x 3 = | 6 x 2 = | 6 x 3 = |
| 6 x 4 = | 6 x 3 = | 6 x 5 = | 6 x 3 = |
| 6 x 4 = | 6 x 1 = | 6 x 4 = | 6 x 2 = |
| 6 x 4 = | 6 x 3 = | 6 x 4 = | 6 x 5 = |
| 6 x 4 = | 6 x 5 = | 6 x 1 = | 6 x 5 = |
| 6 x 2 = | 6 x 5 = | 6 x 3 = | 6 x 5 = |
| 6 x 4 = | 6 x 2 = | 6 x 4 = | 6 x 3 = |
| 6 x 5 = | 6 x 3 = | 6 x 2 = | 6 x 4 = |
| 6 x 3 = | 6 x 5 = | 6 x 2 = | 6 x 4 = |

multiply by 6 (1-5)



Lesson 8: Create a tangram puzzle and observe relationships among the shapes.

| 6 x 1 = | 6 x 2 = | 6 x 3 = | 6 x 4 = |
|---------|----------|---------|----------|
| 6 x 5 = | 6 x 6 = | 6 x 7 = | 6 x 8 = |
| 6 x 9 = | 6 x 10 = | 6 x 5 = | 6 x 6 = |
| 6 x 5 = | 6 x 7 = | 6 x 5 = | 6 x 8 = |
| 6 x 5 = | 6 x 9 = | 6 x 5 = | 6 x 10 = |
| 6 x 6 = | 6 x 5 = | 6 x 6 = | 6 x 7 = |
| 6 x 6 = | 6 x 8 = | 6 x 6 = | 6 x 9 = |
| 6 x 6 = | 6 x 7 = | 6 x 6 = | 6 x 7 = |
| 6 x 8 = | 6 x 7 = | 6 x 9 = | 6 x 7 = |
| 6 x 8 = | 6 x 6 = | 6 x 8 = | 6 x 7 = |
| 6 x 8 = | 6 x 9 = | 6 x 9 = | 6 x 6 = |
| 6 x 9 = | 6 x 7 = | 6 x 9 = | 6 x 8 = |
| 6 x 9 = | 6 x 8 = | 6 x 6 = | 6 x 9 = |
| 6 x 7 = | 6 x 9 = | 6 x 6 = | 6 x 8 = |
| 6 x 9 = | 6 x 7 = | 6 x 6 = | 6 x 8 = |

multiply by 6 (6–10)



Lesson 9:

: Reason about composing and decomposing polygons using tangrams.

| 7 x 1 = | 7 x 2 = | 7 x 3 = | 7 x 4 = |
|---------|---------|---------|---------|
| 7 x 5 = | 7 x 1 = | 7 x 2 = | 7 x 1 = |
| 7 x 3 = | 7 x 1 = | 7 x 4 = | 7 x 1 = |
| 7 x 5 = | 7 x 1 = | 7 x 2 = | 7 x 3 = |
| 7 x 2 = | 7 x 4 = | 7 x 2 = | 7 x 5 = |
| 7 x 2 = | 7 x 1 = | 7 x 2 = | 7 x 3 = |
| 7 x 1 = | 7 x 3 = | 7 x 2 = | 7 x 3 = |
| 7 x 4 = | 7 x 3 = | 7 x 5 = | 7 x 3 = |
| 7 x 4 = | 7 x 1 = | 7 x 4 = | 7 x 2 = |
| 7 x 4 = | 7 x 3 = | 7 x 4 = | 7 x 5 = |
| 7 x 4 = | 7 x 5 = | 7 x 1 = | 7 x 5 = |
| 7 x 2 = | 7 x 5 = | 7 x 3 = | 7 x 5 = |
| 7 x 4 = | 7 x 2 = | 7 x 4 = | 7 x 3 = |
| 7 x 5 = | 7 x 3 = | 7 x 2 = | 7 x 4 = |
| 7 x 3 = | 7 x 5 = | 7 x 2 = | 7 x 4 = |

multiply by 7 (1–5)



Lesson 10:

Decompose quadrilaterals to understand perimeter as the boundary of a shape.

Lesson 12:

Measure side lengths in whole number units to determine the perimeter of polygons.

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| 7 x 1 = | 7 x 2 = | 7 x 3 = | 7 x 4 = |
|---------|----------|---------|----------|
| 7 x 5 = | 7 x 6 = | 7 x 7 = | 7 x 8 = |
| 7 x 9 = | 7 x 10 = | 7 x 5 = | 7 x 6 = |
| 7 x 5 = | 7 x 7 = | 7 x 5 = | 7 x 8 = |
| 7 x 5 = | 7 x 9 = | 7 x 5 = | 7 x 10 = |
| 7 x 6 = | 7 x 5 = | 7 x 6 = | 7 x 7 = |
| 7 x 6 = | 7 x 8 = | 7 x 6 = | 7 x 9 = |
| 7 x 6 = | 7 x 7 = | 7 x 6 = | 7 x 7 = |
| 7 x 8 = | 7 x 7 = | 7 x 9 = | 7 x 7 = |
| 7 x 8 = | 7 x 6 = | 7 x 8 = | 7 x 7 = |
| 7 x 8 = | 7 x 9 = | 7 x 9 = | 7 x 6 = |
| 7 x 9 = | 7 x 7 = | 7 x 9 = | 7 x 8 = |
| 7 x 9 = | 7 x 8 = | 7 x 6 = | 7 x 9 = |
| 7 x 7 = | 7 x 9 = | 7 x 6 = | 7 x 8 = |
| 7 x 9 = | 7 x 7 = | 7 x 6 = | 7 x 8 = |

multiply by 7 (6–10)



Multiply.
| 8 x 1 = | 8 x 2 = | 8 x 3 = | 8 x 4 = |
|---------|---------|---------|---------|
| 8 x 5 = | 8 x 1 = | 8 x 2 = | 8 x 1 = |
| 8 x 3 = | 8 x 1 = | 8 x 4 = | 8 x 1 = |
| 8 x 5 = | 8 x 1 = | 8 x 2 = | 8 x 3 = |
| 8 x 2 = | 8 x 4 = | 8 x 2 = | 8 x 5 = |
| 8 x 2 = | 8 x 1 = | 8 x 2 = | 8 x 3 = |
| 8 x 1 = | 8 x 3 = | 8 x 2 = | 8 x 3 = |
| 8 x 4 = | 8 x 3 = | 8 x 5 = | 8 x 3 = |
| 8 x 4 = | 8 x 1 = | 8 x 4 = | 8 x 2 = |
| 8 x 4 = | 8 x 3 = | 8 x 4 = | 8 x 5 = |
| 8 x 4 = | 8 x 5 = | 8 x 1 = | 8 x 5 = |
| 8 x 2 = | 8 x 5 = | 8 x 3 = | 8 x 5 = |
| 8 x 4 = | 8 x 2 = | 8 x 4 = | 8 x 3 = |
| 8 x 5 = | 8 x 3 = | 8 x 2 = | 8 x 4 = |
| 8 x 3 = | 8 x 5 = | 8 x 2 = | 8 x 4 = |

multiply by 8 (1-5)



Lesson 13: Explore perimeter as an attribute of plane figures and solve problems.

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| Lesson | 14 | Pattern | Sheet | 3•7 |
|--------|----|---------|-------|-----|
| | | | | _ |

Multiply.

A STORY OF UNITS

| in alcipiy: | | | | |
|-------------|-------|------|---------|----------|
| 8 x 1 = | 8 x | 2 = | 8 x 3 = | 8 x 4 = |
| 8 x 5 = | 8 x | 6 = | 8 x 7 = | 8 x 8 = |
| 8 x 9 = | 8 x 1 | 10 = | 8 x 5 = | 8 x 6 = |
| 8 x 5 = | 8 x | 7 = | 8 x 5 = | 8 x 8 = |
| 8 x 5 = | 8 x | 9 = | 8 x 5 = | 8 x 10 = |
| 8 x 6 = | 8 x | 5 = | 8 x 6 = | 8 x 7 = |
| 8 x 6 = | 8 x | 8 = | 8 x 6 = | 8 x 9 = |
| 8 x 6 = | 8 x | 7 = | 8 x 6 = | 8 x 7 = |
| 8 x 8 = | 8 x | 7 = | 8 x 9 = | 8 x 7 = |
| 8 x 8 = | 8 x | 6 = | 8 x 8 = | 8 x 7 = |
| 8 x 8 = | 8 x | 9 = | 8 x 9 = | 8 x 6 = |
| 8 x 9 = | 8 x | 7 = | 8 x 9 = | 8 x 8 = |
| 8 x 9 = | 8 x | 8 = | 8 x 6 = | 8 x 9 = |
| 8 x 7 = | 8 x | 9 = | 8 x 6 = | 8 x 8 = |
| 8 x 9 = | 8 x | 7 = | 8 x 6 = | 8 x 8 = |

multiply by 8 (6–10)



Lesson 14:

Determine the perimeter of regular polygons and rectangles when whole number measurements are unknown.



| 9 x 1 = | 9 x 2 = | 9 x 3 = | 9 x 4 = |
|---------|---------|---------|---------|
| 9 x 5 = | 9 x 1 = | 9 x 2 = | 9 x 1 = |
| 9 x 3 = | 9 x 1 = | 9 x 4 = | 9 x 1 = |
| 9 x 5 = | 9 x 1 = | 9 x 2 = | 9 x 3 = |
| 9 x 2 = | 9 x 4 = | 9 x 2 = | 9 x 5 = |
| 9 x 2 = | 9 x 1 = | 9 x 2 = | 9 x 3 = |
| 9 x 1 = | 9 x 3 = | 9 x 2 = | 9 x 3 = |
| 9 x 4 = | 9 x 3 = | 9 x 5 = | 9 x 3 = |
| 9 x 4 = | 9 x 1 = | 9 x 4 = | 9 x 2 = |
| 9 x 4 = | 9 x 3 = | 9 x 4 = | 9 x 5 = |
| 9 x 4 = | 9 x 5 = | 9 x 1 = | 9 x 5 = |
| 9 x 2 = | 9 x 5 = | 9 x 3 = | 9 x 5 = |
| 9 x 4 = | 9 x 2 = | 9 x 4 = | 9 x 3 = |
| 9 x 5 = | 9 x 3 = | 9 x 2 = | 9 x 4 = |
| 9 x 3 = | 9 x 5 = | 9 x 2 = | 9 x 4 = |

multiply by 9 (1-5)



Lesson 15: Solve word problems to determine perimeter with given side lengths.

| 9 x 1 = | 9 x 2 = | 9 x 3 = | 9 x 4 = |
|---------|----------|---------|----------|
| 9 x 5 = | 9 x 6 = | 9 x 7 = | 9 x 8 = |
| 9 x 9 = | 9 x 10 = | 9 x 5 = | 9 x 6 = |
| 9 x 5 = | 9 x 7 = | 9 x 5 = | 9 x 8 = |
| 9 x 5 = | 9 x 9 = | 9 x 5 = | 9 x 10 = |
| 9 x 6 = | 9 x 5 = | 9 x 6 = | 9 x 7 = |
| 9 x 6 = | 9 x 8 = | 9 x 6 = | 9 x 9 = |
| 9 x 6 = | 9 x 7 = | 9 x 6 = | 9 x 7 = |
| 9 x 8 = | 9 x 7 = | 9 x 9 = | 9 x 7 = |
| 9 x 8 = | 9 x 6 = | 9 x 8 = | 9 x 7 = |
| 9 x 8 = | 9 x 9 = | 9 x 9 = | 9 x 6 = |
| 9 x 9 = | 9 x 7 = | 9 x 9 = | 9 x 8 = |
| 9 x 9 = | 9 x 8 = | 9 x 6 = | 9 x 9 = |
| 9 x 7 = | 9 x 9 = | 9 x 6 = | 9 x 8 = |
| 9 x 9 = | 9 x 7 = | 9 x 6 = | 9 x 8 = |

multiply by 9 (6-10)



Lesson 16:

Use string to measure the perimeter of various circles to the nearest quarter inch.

Α

Multiply or Divide by 2

| 2 × 2 = | |
|----------|--|
| 3 × 2 = | |
| 4 × 2 = | |
| 5 × 2 = | |
| 1 × 2 = | |
| 4 ÷ 2 = | |
| 6 ÷ 2 = | |
| 10 ÷ 2 = | |
| 2 ÷ 1 = | |
| 8 ÷ 2 = | |
| 6 × 2 = | |
| 7 × 2 = | |
| 8 × 2 = | |
| 9 × 2 = | |
| 10 × 2 = | |
| 16 ÷ 2 = | |
| 14 ÷ 2 = | |
| 18 ÷ 2 = | |
| 12 ÷ 2 = | |
| 20 ÷ 2 = | |
| ×2 = 10 | |
| ×2 = 12 | |
| | $2 \times 2 =$ $3 \times 2 =$ $4 \times 2 =$ $5 \times 2 =$ $1 \times 2 =$ $4 \div 2 =$ $6 \div 2 =$ $10 \div 2 =$ $2 \div 1 =$ $8 \div 2 =$ $6 \times 2 =$ $7 \times 2 =$ $8 \times 2 =$ $9 \times 2 =$ $10 \times 2 =$ $10 \times 2 =$ $10 \times 2 =$ $16 \div 2 =$ $14 \div 2 =$ $14 \div 2 =$ $14 \div 2 =$ $14 \div 2 =$ $12 \div 2 =$ $20 \div 2 =$ |

| 23. | ×2 = 20 | |
|-----|----------|--|
| 24. | ×2=4 | |
| 25. | ×2=6 | |
| 26. | 20 ÷ 2 = | |
| 27. | 10 ÷ 2 = | |
| 28. | 2 ÷ 1 = | |
| 29. | 4 ÷ 2 = | |
| 30. | 6 ÷ 2 = | |
| 31. | ×2 = 12 | |
| 32. | ×2 = 14 | |
| 33. | ×2 = 18 | |
| 34. | ×2 = 16 | |
| 35. | 14 ÷ 2 = | |
| 36. | 18 ÷ 2 = | |
| 37. | 12 ÷ 2 = | |
| 38. | 16 ÷ 2 = | |
| 39. | 11 × 2 = | |
| 40. | 22 ÷ 2 = | |
| 41. | 12 × 2 = | |
| 42. | 24 ÷ 2 = | |
| 43. | 14 × 2 = | |
| 44. | 28 ÷ 2 = | |



Lesson 20:

Construct rectangles with a given perimeter using unit squares and determine their areas.

B

П

Multiply or Divide by 2

Number Correct: _____

Improvement: _____

| 1. | 1 × 2 = | |
|-----|----------|--|
| 2. | 2 × 2 = | |
| 3. | 3 × 2 = | |
| 4. | 4 × 2 = | |
| 5. | 5 × 2 = | |
| 6. | 6 ÷ 2 = | |
| 7. | 4 ÷ 2 = | |
| 8. | 8 ÷ 2 = | |
| 9. | 2 ÷ 1 = | |
| 10. | 10 ÷ 2 = | |
| 11. | 10 × 2 = | |
| 12. | 6 × 2 = | |
| 13. | 7 × 2 = | |
| 14. | 8 × 2 = | |
| 15. | 9 × 2 = | |
| 16. | 14 ÷ 2 = | |
| 17. | 12 ÷ 2 = | |
| 18. | 16 ÷ 2 = | |
| 19. | 20 ÷ 2 = | |
| 20. | 18÷2 = | |
| 21. | ×2 = 12 | |
| 22. | ×2 = 10 | |

Т

| 23. | ×2=4 | |
|-----|----------|--|
| 24. | ×2 = 20 | |
| 25. | ×2=6 | |
| 26. | 4 ÷ 2 = | |
| 27. | 2 ÷ 1 = | |
| 28. | 20 ÷ 2 = | |
| 29. | 10 ÷ 2 = | |
| 30. | 6 ÷ 2 = | |
| 31. | ×2 = 12 | |
| 32. | ×2 = 16 | |
| 33. | ×2 = 18 | |
| 34. | ×2 = 14 | |
| 35. | 16 ÷ 2 = | |
| 36. | 18 ÷ 2 = | |
| 37. | 12 ÷ 2 = | |
| 38. | 14 ÷ 2 = | |
| 39. | 11 × 2 = | |
| 40. | 22 ÷ 2 = | |
| 41. | 12 × 2 = | |
| 42. | 24 ÷ 2 = | |
| 43. | 13 × 2 = | |
| 44. | 26 ÷ 2 = | |



Lesson 20:

Construct rectangles with a given perimeter using unit squares and determine their areas.

Α

Multiply or Divide by 3

| 1. | 2 × 3 = | |
|-----|----------|--|
| 2. | 3 × 3 = | |
| 3. | 4 × 3 = | |
| 4. | 5 × 3 = | |
| 5. | 1 × 3 = | |
| 6. | 6 ÷ 3 = | |
| 7. | 9 ÷ 3 = | |
| 8. | 15 ÷ 3 = | |
| 9. | 3 ÷ 3 = | |
| 10. | 12 ÷ 3 = | |
| 11. | 6 × 3 = | |
| 12. | 7 × 3 = | |
| 13. | 8 × 3 = | |
| 14. | 9 × 3 = | |
| 15. | 10 × 3 = | |
| 16. | 24 ÷ 3 = | |
| 17. | 21 ÷ 3 = | |
| 18. | 27 ÷ 3 = | |
| 19. | 18 ÷ 3 = | |
| 20. | 30 ÷ 3 = | |
| 21. | ×3 = 15 | |
| 22. | ×3=3 | |

| 23. | ×3 = 30 | |
|-----|----------|--|
| 24. | ×3=6 | |
| 25. | ×3=9 | |
| 26. | 30 ÷ 3 = | |
| 27. | 15 ÷ 3 = | |
| 28. | 3 ÷ 3 = | |
| 29. | 6 ÷ 3 = | |
| 30. | 9÷3= | |
| 31. | ×3 = 18 | |
| 32. | ×3 = 21 | |
| 33. | ×3 = 27 | |
| 34. | ×3 = 24 | |
| 35. | 21 ÷ 3 = | |
| 36. | 27 ÷ 3 = | |
| 37. | 18 ÷ 3 = | |
| 38. | 24 ÷ 3 = | |
| 39. | 11 × 3 = | |
| 40. | 33 ÷ 3 = | |
| 41. | 12 × 3 = | |
| 42. | 36 ÷ 3 = | |
| 43. | 13 × 3 = | |
| 44. | 39 ÷ 3 = | |



Lesson 21:

Construct rectangles with a given perimeter using unit squares and determine their areas.

Improvement: _____

B

Multiply or Divide by 3

| 1. | 1 × 3 = | |
|-----|-----------------|--|
| 2. | 2 × 3 = | |
| 3. | 3 × 3 = | |
| 4. | 4 × 3 = | |
| 5. | 5 × 3 = | |
| 6. | 9 ÷ 3 = | |
| 7. | 6 ÷ 3 = | |
| 8. | <u>12</u> ÷ 3 = | |
| 9. | 3 ÷ 3 = | |
| 10. | 15 ÷ 3 = | |
| 11. | <u>10 × 3 =</u> | |
| 12. | 6 × 3 = | |
| 13. | 7 × 3 = | |
| 14. | 8 × 3 = | |
| 15. | 9 × 3 = | |
| 16. | 21 ÷ 3 = | |
| 17. | 18 ÷ 3 = | |
| 18. | 24 ÷ 3 = | |
| 19. | 30 ÷ 3 = | |
| 20. | 27 ÷ 3 = | |
| 21. | ×3=3 | |
| 22. | ×3 = 15 | |

| 23. | ×3=6 | |
|-----|----------|--|
| 24. | ×3 = 30 | |
| 25. | ×3=9 | |
| 26. | 6 ÷ 3 = | |
| 27. | 3 ÷ 3 = | |
| 28. | 30 ÷ 3 = | |
| 29. | 15 ÷ 3 = | |
| 30. | 9 ÷ 3 = | |
| 31. | ×3 = 18 | |
| 32. | ×3 = 24 | |
| 33. | ×3 = 27 | |
| 34. | ×3 = 21 | |
| 35. | 24 ÷ 3 = | |
| 36. | 27 ÷ 3 = | |
| 37. | 18 ÷ 3 = | |
| 38. | 21 ÷ 3 = | |
| 39. | 11 × 3 = | |
| 40. | 33 ÷ 3 = | |
| 41. | 12 × 3 = | |
| 42. | 36 ÷ 3 = | |
| 43. | 13 × 3 = | |
| 44. | 39 ÷ 3 = | |
| | | |



Lesson 21:

Construct rectangles with a given perimeter using unit squares and determine their areas.

Α

Multiply or Divide by 4

| 1. | 2 × 4 = | |
|-----|----------|--|
| 2. | 3 × 4 = | |
| 3. | 4 × 4 = | |
| 4. | 5 × 4 = | |
| 5. | 1 × 4 = | |
| 6. | 8 ÷ 4 = | |
| 7. | 12 ÷ 4 = | |
| 8. | 20 ÷ 4 = | |
| 9. | 4 ÷ 4 = | |
| 10. | 16 ÷ 4 = | |
| 11. | 6 × 4 = | |
| 12. | 7 × 4 = | |
| 13. | 8 × 4 = | |
| 14. | 9 × 4 = | |
| 15. | 10 × 4 = | |
| 16. | 32 ÷ 4 = | |
| 17. | 28 ÷ 4 = | |
| 18. | 36 ÷ 4 = | |
| 19. | 24 ÷ 4 = | |
| 20. | 40 ÷ 4 = | |
| 21. | ×4 = 20 | |
| 22. | ×4=4 | |

| 23. | ×4 = 40 | |
|-----|-----------------|--|
| 24. | ×4 = 8 | |
| 25. | ×4 = 12 | |
| 26. | 40 ÷ 4 = | |
| 27. | 20 ÷ 4 = | |
| 28. | 4 ÷ 4 = | |
| 29. | 8 ÷ 4 = | |
| 30. | 12 ÷ 4 = | |
| 31. | ×4 = 24 | |
| 32. | ×4 = 28 | |
| 33. | ×4 = 36 | |
| 34. | ×4 = 32 | |
| 35. | 28 ÷ 4 = | |
| 36. | 36 ÷ 4 = | |
| 37. | 24 ÷ 4 = | |
| 38. | 32 ÷ 4 = | |
| 39. | <u>11 × 4 =</u> | |
| 40. | 44 ÷ 4 = | |
| 41. | 12 ÷ 4 = | |
| 42. | 48 ÷ 4 = | |
| 43. | 14 × 4 = | |
| 44. | 56 ÷ 4 = | |



Use a line plot to record the number of rectangles constructed in Lessons 20 and 21.

Multiply or Divide by 4

B

Number Correct: _____

Improvement: _____

1 × 4 = 1. 2 × 4 = 2. 3 × 4 = 3. 4. 4 × 4 = 5 × 4 = 5. 12 ÷ 4 = 6. 8 ÷ 4 = 7. 16 ÷ 4 = 8. 4 ÷ 4 = 9. 20 ÷ 4 = 10. 10 × 4 = 11. 6 × 4 = 12. 7 × 4 = 13. 14. 8 × 4 = 9 × 4 = 15. 28 ÷ 4 = 16. 24 ÷ 4 = 17. 32 ÷ 4 = 18. 40 ÷ 4 = 19. 36 ÷ 4 = 20. ___×4=4 21. 22. ____ × 4 = 20

| 23. | ×4=8 | |
|-----|----------|--|
| 24. | ×4 = 40 | |
| 25. | ×4 = 12 | |
| 26. | 8 ÷ 4 = | |
| 27. | 4 ÷ 4 = | |
| 28. | 40 ÷ 4 = | |
| 29. | 20 ÷ 4 = | |
| 30. | 12 ÷ 4 = | |
| 31. | ×4 = 12 | |
| 32. | ×4 = 16 | |
| 33. | ×4 = 36 | |
| 34. | ×4 = 28 | |
| 35. | 32 ÷ 4 = | |
| 36. | 36 ÷ 4 = | |
| 37. | 24 ÷ 4 = | |
| 38. | 28 ÷ 4 = | |
| 39. | 11 × 4 = | |
| 40. | 44 ÷ 4 = | |
| 41. | 12 × 4 = | |
| 42. | 48 ÷ 4 = | |
| 43. | 13 × 4 = | |
| 44. | 52 ÷ 4 = | |



Lesson 22:

Use a line plot to record the number of rectangles constructed in Lessons 20 and 21.

| Λ | |
|---|--|
| | |

Multiply or Divide by 5

| 1 | 2 × 5 = | |
|-----|----------|--|
| 1. | | |
| 2. | 3 × 5 = | |
| 3. | 4 × 5 = | |
| 4. | 5 × 5 = | |
| 5. | 1 × 5 = | |
| 6. | 10 ÷ 5 = | |
| 7. | 15 ÷ 5 = | |
| 8. | 25 ÷ 5 = | |
| 9. | 5 ÷ 5 = | |
| 10. | 20 ÷ 5 = | |
| 11. | 6 × 5 = | |
| 12. | 7 × 5 = | |
| 13. | 8 × 5 = | |
| 14. | 9 × 5 = | |
| 15. | 10 × 5 = | |
| 16. | 40 ÷ 5 = | |
| 17. | 35 ÷ 5 = | |
| 18. | 45 ÷ 5 = | |
| 19. | 30 ÷ 5 = | |
| 20. | 50 ÷ 5 = | |
| 21. | ×5 = 25 | |
| 22. | ×5=5 | |

| 23. | ×5 = 50 | |
|-----|----------|--|
| 24. | ×5 = 10 | |
| 25. | ×5 = 15 | |
| 26. | 50 ÷ 5 = | |
| 27. | 25 ÷ 5 = | |
| 28. | 5 ÷ 5 = | |
| 29. | 10 ÷ 5 = | |
| 30. | 15 ÷ 5 = | |
| 31. | × 5 = 30 | |
| 32. | × 5 = 35 | |
| 33. | ×5 = 45 | |
| 34. | ×5 = 40 | |
| 35. | 35 ÷ 5 = | |
| 36. | 45 ÷ 5 = | |
| 37. | 30 ÷ 5 = | |
| 38. | 40 ÷ 5 = | |
| 39. | 11 × 5 = | |
| 40. | 55 ÷ 5 = | |
| 41. | 15 ÷ 5 = | |
| 42. | 60 ÷ 5 = | |
| 43. | 12 × 5 = | |
| 44. | 70 ÷ 5 = | |



Solve a variety of word problems with perimeter. Lesson 23:

Improvement: _____

B

Multiply or Divide by 5

| 1. | 1 × 5 = | |
|-----|----------|--|
| 2. | 2 × 5 = | |
| 3. | 3 × 5 = | |
| 4. | 4 × 5 = | |
| 5. | 5 × 5 = | |
| 6. | 15 ÷ 5 = | |
| 7. | 10 ÷ 5 = | |
| 8. | 20 ÷ 5 = | |
| 9. | 5 ÷ 5 = | |
| 10. | 25 ÷ 5 = | |
| 11. | 10 × 5 = | |
| 12. | 6 × 5 = | |
| 13. | 7 × 5 = | |
| 14. | 8 × 5 = | |
| 15. | 9 × 5 = | |
| 16. | 35 ÷ 5 = | |
| 17. | 30 ÷ 5 = | |
| 18. | 40 ÷ 5 = | |
| 19. | 50 ÷ 5 = | |
| 20. | 45 ÷ 5 = | |
| 21. | ×5=5 | |
| 22. | ×5 = 25 | |

| 23. | ×5 = 10 | |
|-----|----------|--|
| 24. | ×5 = 50 | |
| 25. | ×5 = 15 | |
| 26. | 10 ÷ 5 = | |
| 27. | 5 ÷ 5 = | |
| 28. | 50 ÷ 5 = | |
| 29. | 25 ÷ 5 = | |
| 30. | 15 ÷ 5 = | |
| 31. | ×5 = 15 | |
| 32. | × 5 = 20 | |
| 33. | × 5 = 45 | |
| 34. | × 5 = 35 | |
| 35. | 40 ÷ 5 = | |
| 36. | 45 ÷ 5 = | |
| 37. | 30 ÷ 5 = | |
| 38. | 35 ÷ 5 = | |
| 39. | 11 × 5 = | |
| 40. | 55 ÷ 5 = | |
| 41. | 12 × 5 = | |
| 42. | 60 ÷ 5 = | |
| 43. | 13 × 5 = | |
| 44. | 65 ÷ 5 = | |



Lesson 23: Solve a variety of word problems with perimeter.

٦

| 6 x 1 = | 6 x 2 = | 6 x 3 = | 6 x 4 = |
|---------|----------|---------|----------|
| 6 x 5 = | 6 x 6 = | 6 x 7 = | 6 x 8 = |
| 6 x 9 = | 6 x 10 = | 6 x 5 = | 6 x 6 = |
| 6 x 5 = | 6 x 7 = | 6 x 5 = | 6 x 8 = |
| 6 x 5 = | 6 x 9 = | 6 x 5 = | 6 x 10 = |
| 6 x 6 = | 6 x 5 = | 6 x 6 = | 6 x 7 = |
| 6 x 6 = | 6 x 8 = | 6 x 6 = | 6 x 9 = |
| 6 x 6 = | 6 x 7 = | 6 x 6 = | 6 x 7 = |
| 6 x 8 = | 6 x 7 = | 6 x 9 = | 6 x 7 = |
| 6 x 8 = | 6 x 6 = | 6 x 8 = | 6 x 7 = |
| 6 x 8 = | 6 x 9 = | 6 x 9 = | 6 x 6 = |
| 6 x 9 = | 6 x 7 = | 6 x 9 = | 6 x 8 = |
| 6 x 9 = | 6 x 8 = | 6 x 6 = | 6 x 9 = |
| 6 x 7 = | 6 x 9 = | 6 x 6 = | 6 x 8 = |
| 6 x 9 = | 6 x 7 = | 6 x 6 = | 6 x 8 = |

multiply by 6 (6-10)



Lesson 24:

Use rectangles to draw a robot with specified perimeter measurements, and reason about the different areas that may be produced.

A

Multiply or Divide by 6

| 1. | 2 × 6 = | |
|-----|----------|--|
| 2. | 3 × 6 = | |
| 3. | 4 × 6 = | |
| 4. | 5 × 6 = | |
| 5. | 1 × 6 = | |
| 6. | 12 ÷ 6 = | |
| 7. | 18 ÷ 6 = | |
| 8. | 30 ÷ 6 = | |
| 9. | 6 ÷ 6 = | |
| 10. | 24 ÷ 6 = | |
| 11. | 6 × 6 = | |
| 12. | 7 × 6 = | |
| 13. | 8 × 6 = | |
| 14. | 9 × 6 = | |
| 15. | 10 × 6 = | |
| 16. | 48 ÷ 6 = | |
| 17. | 42 ÷ 6 = | |
| 18. | 54 ÷ 6 = | |
| 19. | 36 ÷ 6 = | |
| 20. | 60 ÷ 6 = | |
| 21. | × 6 = 30 | |
| 22. | × 6 = 6 | |
| | | |

| 23. | × 6 = 60 | |
|-----|----------|--|
| 24. | ×6 = 12 | |
| 25. | ×6 = 18 | |
| 26. | 60 ÷ 6 = | |
| 27. | 30 ÷ 6 = | |
| 28. | 6 ÷ 6 = | |
| 29. | 12 ÷ 6 = | |
| 30. | 18 ÷ 6 = | |
| 31. | × 6 = 36 | |
| 32. | ×6 = 42 | |
| 33. | ×6 = 54 | |
| 34. | × 6 = 48 | |
| 35. | 42 ÷ 6 = | |
| 36. | 54 ÷ 6 = | |
| 37. | 36 ÷ 6 = | |
| 38. | 48 ÷ 6 = | |
| 39. | 11 × 6 = | |
| 40. | 66 ÷ 6 = | |
| 41. | 12 × 6 = | |
| 42. | 72 ÷ 6 = | |
| 43. | 14 × 6 = | |
| 44. | 84 ÷ 6 = | |



Lesson 25:

Use rectangles to draw a robot with specified perimeter measurements, and reason about the different areas that may be produced.

Improvement: _____

B

Multiply or Divide by 6

| 1. | 1 × 6 = | |
|-----|----------|--|
| 2. | 2 × 6 = | |
| 3. | 3 × 6 = | |
| 4. | 4 × 6 = | |
| 5. | 5 × 6 = | |
| 6. | 18 ÷ 6 = | |
| 7. | 12 ÷ 6 = | |
| 8. | 24 ÷ 6 = | |
| 9. | 6 ÷ 6 = | |
| 10. | 30 ÷ 6 = | |
| 11. | 10 × 6 = | |
| 12. | 6 × 6 = | |
| 13. | 7 × 6 = | |
| 14. | 8 × 6 = | |
| 15. | 9 × 6 = | |
| 16. | 42 ÷ 6 = | |
| 17. | 36 ÷ 6 = | |
| 18. | 48 ÷ 6 = | |
| 19. | 60 ÷ 6 = | |
| 20. | 54 ÷ 6 = | |
| 21. | ×6=6 | |
| 22. | ×6=30 | |

| 23. | ×6 = 12 | |
|-----|----------|--|
| 24. | × 6 = 60 | |
| 25. | ×6 = 18 | |
| 26. | 12 ÷ 6 = | |
| 27. | 6 ÷ 6 = | |
| 28. | 60 ÷ 6 = | |
| 29. | 30 ÷ 6 = | |
| 30. | 18 ÷ 6 = | |
| 31. | ×6 = 18 | |
| 32. | ×6 = 24 | |
| 33. | ×6 = 54 | |
| 34. | ×6 = 42 | |
| 35. | 48 ÷ 6 = | |
| 36. | 54 ÷ 6 = | |
| 37. | 36 ÷ 6 = | |
| 38. | 42 ÷ 6 = | |
| 39. | 11 × 6 = | |
| 40. | 66 ÷ 6 = | |
| 41. | 12 × 6 = | |
| 42. | 72 ÷ 6 = | |
| 43. | 13 × 6 = | |
| 44. | 78 ÷ 6 = | |



Lesson 25:

Use rectangles to draw a robot with specified perimeter measurements, and reason about the different areas that may be produced.

| 7 x 1 = | 7 x 2 = | 7 x 3 = | 7 x 4 = |
|---------|----------|---------|----------|
| 7 x 5 = | 7 x 6 = | 7 x 7 = | 7 x 8 = |
| 7 x 9 = | 7 x 10 = | 7 x 5 = | 7 x 6 = |
| 7 x 5 = | 7 x 7 = | 7 x 5 = | 7 x 8 = |
| 7 x 5 = | 7 x 9 = | 7 x 5 = | 7 x 10 = |
| 7 x 6 = | 7 x 5 = | 7 x 6 = | 7 x 7 = |
| 7 x 6 = | 7 x 8 = | 7 x 6 = | 7 x 9 = |
| 7 x 6 = | 7 x 7 = | 7 x 6 = | 7 x 7 = |
| 7 x 8 = | 7 x 7 = | 7 x 9 = | 7 x 7 = |
| 7 x 8 = | 7 x 6 = | 7 x 8 = | 7 x 7 = |
| 7 x 8 = | 7 x 9 = | 7 x 9 = | 7 x 6 = |
| 7 x 9 = | 7 x 7 = | 7 x 9 = | 7 x 8 = |
| 7 x 9 = | 7 x 8 = | 7 x 6 = | 7 x 9 = |
| 7 x 7 = | 7 x 9 = | 7 x 6 = | 7 x 8 = |
| 7 x 9 = | 7 x 7 = | 7 x 6 = | 7 x 8 = |

multiply by 7 (6–10)



Lesson 26:

Use rectangles to draw a robot with specified perimeter measurements, and reason about the different areas that may be produced.

| Λ |
|---|
| 7 |

Multiply or Divide by 7

| 1. | 2 × 7 = | |
|-----|----------|--|
| 2. | 3 × 7 = | |
| 3. | 4 × 7 = | |
| 4. | 5 × 7 = | |
| 5. | 1 × 7 = | |
| 6. | 14 ÷ 7 = | |
| 7. | 21 ÷ 7 = | |
| 8. | 35 ÷ 7 = | |
| 9. | 7 ÷ 7 = | |
| 10. | 28 ÷ 7 = | |
| 11. | 6 × 7 = | |
| 12. | 7 × 7 = | |
| 13. | 8 × 7 = | |
| 14. | 9 × 7 = | |
| 15. | 10 × 7 = | |
| 16. | 56 ÷ 7 = | |
| 17. | 49 ÷ 7 = | |
| 18. | 63 ÷ 7 = | |
| 19. | 42 ÷ 7 = | |
| 20. | 70 ÷ 7 = | |
| 21. | ×7=35 | |
| 22. | ×7=7 | |

| ×7 = 70 | |
|----------|--|
| ×7 = 14 | |
| ×7=21 | |
| 70 ÷ 7 = | |
| 35 ÷ 7 = | |
| 7 ÷ 7 = | |
| 14 ÷ 7 = | |
| 21 ÷ 7 = | |
| ×7=42 | |
| ×7=49 | |
| ×7=63 | |
| ×7=56 | |
| 49 ÷ 7 = | |
| 63 ÷ 7 = | |
| 42 ÷ 7 = | |
| 56 ÷ 7 = | |
| 11 × 7 = | |
| 77 ÷ 7 = | |
| 12 × 7 = | |
| 84 ÷ 7 = | |
| 14 × 7 = | |
| 98 ÷ 7 = | |
| | |



Lesson 27:

Use rectangles to draw a robot with specified perimeter measurements, and reason about the different areas that may be produced.

Multiply or Divide by 7

B

Number Correct: _____

Improvement: _____

| 1. | 1 × 7 = | |
|-----|----------|--|
| 2. | 2 × 7 = | |
| 3. | 3 × 7 = | |
| 4. | 4 × 7 = | |
| 5. | 5 × 7 = | |
| 6. | 21 ÷ 7 = | |
| 7. | 14 ÷ 7 = | |
| 8. | 28 ÷ 7 = | |
| 9. | 7 ÷ 7 = | |
| 10. | 35 ÷ 7 = | |
| 11. | 10 × 7 = | |
| 12. | 6 × 7 = | |
| 13. | 7 × 7 = | |
| 14. | 8 × 7 = | |
| 15. | 9 × 7 = | |
| 16. | 49 ÷ 7 = | |
| 17. | 42 ÷ 7 = | |
| 18. | 56 ÷ 7 = | |
| 19. | 70 ÷ 7 = | |
| 20. | 63 ÷ 7 = | |
| 21. | ×7=7 | |
| 22. | ×7=35 | |

| 23. | ×7 = 14 | |
|-----|----------|--|
| 24. | ×7 = 70 | |
| 25. | ×7=21 | |
| 26. | 14 ÷ 7 = | |
| 27. | 7 ÷ 7 = | |
| 28. | 70 ÷ 7 = | |
| 29. | 35 ÷ 7 = | |
| 30. | 21 ÷ 7 = | |
| 31. | ×7=21 | |
| 32. | ×7=28 | |
| 33. | ×7=63 | |
| 34. | ×7 = 49 | |
| 35. | 56 ÷ 7 = | |
| 36. | 63 ÷ 7 = | |
| 37. | 42 ÷ 7 = | |
| 38. | 49 ÷ 7 = | |
| 39. | 11 × 7 = | |
| 40. | 77 ÷ 7 = | |
| 41. | 12 × 7 = | |
| 42. | 84 ÷ 7 = | |
| 43. | 13 × 7 = | |
| 44. | 91 ÷ 7 = | |



Lesson 27:

Use rectangles to draw a robot with specified perimeter measurements, and reason about the different areas that may be produced.

| 8 x 1 = | 8 x 2 = | 8 x 3 = | 8 x 4 = |
|---------|----------|---------|----------|
| 8 x 5 = | 8 x 6 = | 8 x 7 = | 8 x 8 = |
| 8 x 9 = | 8 x 10 = | 8 x 5 = | 8 x 6 = |
| 8 x 5 = | 8 x 7 = | 8 x 5 = | 8 x 8 = |
| 8 x 5 = | 8 x 9 = | 8 x 5 = | 8 x 10 = |
| 8 x 6 = | 8 x 5 = | 8 x 6 = | 8 x 7 = |
| 8 x 6 = | 8 x 8 = | 8 x 6 = | 8 x 9 = |
| 8 x 6 = | 8 x 7 = | 8 x 6 = | 8 x 7 = |
| 8 x 8 = | 8 x 7 = | 8 x 9 = | 8 x 7 = |
| 8 x 8 = | 8 x 6 = | 8 x 8 = | 8 x 7 = |
| 8 x 8 = | 8 x 9 = | 8 x 9 = | 8 x 6 = |
| 8 x 9 = | 8 x 7 = | 8 x 9 = | 8 x 8 = |
| 8 x 9 = | 8 x 8 = | 8 x 6 = | 8 x 9 = |
| 8 x 7 = | 8 x 9 = | 8 x 6 = | 8 x 8 = |
| 8 x 9 = | 8 x 7 = | 8 x 6 = | 8 x 8 = |

multiply by 8 (6-10)



Lesson 28:

Solve a variety of word problems involving area and perimeter using all four operations.

Α

Multiply or Divide by 8

| 1. | 2 × 8 = | |
|-----|-----------------|--|
| 2. | 3 × 8 = | |
| 3. | 4 × 8 = | |
| 4. | 5 × 8 = | |
| 5. | 1 × 8 = | |
| 6. | 16 ÷ 8 = | |
| 7. | 24 ÷ 8 = | |
| 8. | 40 ÷ 8 = | |
| 9. | 8 ÷ 8 = | |
| 10. | 32 ÷ 8 = | |
| 11. | 6 × 8 = | |
| 12. | 7 × 8 = | |
| 13. | 8 × 8 = | |
| 14. | 9 × 8 = | |
| 15. | <u>10 × 8 =</u> | |
| 16. | 64 ÷ 8 = | |
| 17. | 56 ÷ 8 = | |
| 18. | 72 ÷ 8 = | |
| 19. | 48 ÷ 8 = | |
| 20. | 80 ÷ 8 = | |
| 21. | ×8 = 40 | |
| 22. | × 8 = 8 | |

| 23. | × 8 = 80 | |
|-----|-----------|--|
| 24. | ×8 = 16 | |
| 25. | ×8 = 24 | |
| 26. | 80 ÷ 8 = | |
| 27. | 40 ÷ 8 = | |
| 28. | 8 ÷ 8 = | |
| 29. | 16 ÷ 8 = | |
| 30. | 24 ÷ 8 = | |
| 31. | ×8 = 48 | |
| 32. | ×8 = 56 | |
| 33. | ×8 = 72 | |
| 34. | ×8 = 64 | |
| 35. | 56 ÷ 8 = | |
| 36. | 72 ÷ 8 = | |
| 37. | 48 ÷ 8 = | |
| 38. | 64 ÷ 8 = | |
| 39. | 11 × 8 = | |
| 40. | 88 ÷ 8 = | |
| 41. | 12 × 8 = | |
| 42. | 96 ÷ 8 = | |
| 43. | 14 × 8 = | |
| 44. | 112 ÷ 8 = | |



Solve a variety of word problems involving area and perimeter using all four operations.

Improvement: _____

B

Multiply or Divide by 8

| 1. | 1 × 8 = | |
|-----|----------|--|
| 2. | 2 × 8 = | |
| 3. | 3 × 8 = | |
| 4. | 4 × 8 = | |
| 5. | 5 × 8 = | |
| 6. | 24 ÷ 8 = | |
| 7. | 16 ÷ 8 = | |
| 8. | 32 ÷ 8 = | |
| 9. | 8 ÷ 8 = | |
| 10. | 40 ÷ 8 = | |
| 11. | 10 × 8 = | |
| 12. | 6 × 8 = | |
| 13. | 7 × 8 = | |
| 14. | 8 × 8 = | |
| 15. | 9 × 8 = | |
| 16. | 56 ÷ 8 = | |
| 17. | 8 ÷ 8 = | |
| 18. | 64 ÷ 8 = | |
| 19. | 80 ÷ 8 = | |
| 20. | 72 ÷ 8 = | |
| 21. | × 8 = 8 | |
| 22. | ×8 = 40 | |

| 23. | ×8 = 16 | |
|-----|-----------|--|
| 24. | × 8 = 80 | |
| 25. | ×8 = 24 | |
| 26. | 16 ÷ 8 = | |
| 27. | 8 ÷ 8 = | |
| 28. | 80 ÷ 8 = | |
| 29. | 40 ÷ 8 = | |
| 30. | 24 ÷ 8 = | |
| 31. | ×8 = 24 | |
| 32. | ×8 = 32 | |
| 33. | ×8 = 72 | |
| 34. | ×8 = 56 | |
| 35. | 64 ÷ 8 = | |
| 36. | 72 ÷ 8 = | |
| 37. | 48 ÷ 8 = | |
| 38. | 56 ÷ 8 = | |
| 39. | 11 × 8 = | |
| 40. | 88 ÷ 8 = | |
| 41. | 12 × 8 = | |
| 42. | 96 ÷ 8 = | |
| 43. | 13 × 8 = | |
| 44. | 104 ÷ 8 = | |



Lesson 29:

Solve a variety of word problems involving area and perimeter using all four operations.

| 9 x 1 = | 9 x 2 = | 9 x 3 = | 9 x 4 = |
|---------|----------|---------|----------|
| 9 x 5 = | 9 x 6 = | 9 x 7 = | 9 x 8 = |
| 9 x 9 = | 9 x 10 = | 9 x 5 = | 9 x 6 = |
| 9 x 5 = | 9 x 7 = | 9 x 5 = | 9 x 8 = |
| 9 x 5 = | 9 x 9 = | 9 x 5 = | 9 x 10 = |
| 9 x 6 = | 9 x 5 = | 9 x 6 = | 9 x 7 = |
| 9 x 6 = | 9 x 8 = | 9 x 6 = | 9 x 9 = |
| 9 x 6 = | 9 x 7 = | 9 x 6 = | 9 x 7 = |
| 9 x 8 = | 9 x 7 = | 9 x 9 = | 9 x 7 = |
| 9 x 8 = | 9 x 6 = | 9 x 8 = | 9 x 7 = |
| 9 x 8 = | 9 x 9 = | 9 x 9 = | 9 x 6 = |
| 9 x 9 = | 9 x 7 = | 9 x 9 = | 9 x 8 = |
| 9 x 9 = | 9 x 8 = | 9 x 6 = | 9 x 9 = |
| 9 x 7 = | 9 x 9 = | 9 x 6 = | 9 x 8 = |
| 9 x 9 = | 9 x 7 = | 9 x 6 = | 9 x 8 = |

multiply by 9 (6-10)



Lesson 30: Share and critique peer strategies for problem solving.

Α

Multiply or Divide by 9

| 1. | 2 × 9 = | |
|-----|----------|--|
| 2. | 3 × 9 = | |
| 3. | 4 × 9 = | |
| 4. | 5 × 9 = | |
| 5. | 1 × 9 = | |
| 6. | 18÷9= | |
| 7. | 27 ÷ 9 = | |
| 8. | 45 ÷ 9 = | |
| 9. | 9 ÷ 9 = | |
| 10. | 36 ÷ 9 = | |
| 11. | 6 × 9 = | |
| 12. | 7 × 9 = | |
| 13. | 8 × 9 = | |
| 14. | 9 × 9 = | |
| 15. | 10 × 9 = | |
| 16. | 72 ÷ 9 = | |
| 17. | 63 ÷ 9 = | |
| 18. | 81 ÷ 9 = | |
| 19. | 54 ÷ 9 = | |
| 20. | 90 ÷ 9 = | |
| 21. | ×9=45 | |
| 22. | ×9=9 | |

| 23. | ×9 = 90 | |
|-----|-----------|--|
| 24. | ×9 = 18 | |
| 25. | ×9=27 | |
| 26. | 90 ÷ 9 = | |
| 27. | 45 ÷ 9 = | |
| 28. | 9 ÷ 9 = | |
| 29. | 18 ÷ 9 = | |
| 30. | 27 ÷ 9 = | |
| 31. | ×9 = 54 | |
| 32. | ×9=63 | |
| 33. | ×9=81 | |
| 34. | ×9 = 72 | |
| 35. | 63 ÷ 9 = | |
| 36. | 81 ÷ 9 = | |
| 37. | 54 ÷ 9 = | |
| 38. | 72 ÷ 9 = | |
| 39. | 11 × 9 = | |
| 40. | 99 ÷ 9 = | |
| 41. | 12 × 9 = | |
| 42. | 108 ÷ 9 = | |
| 43. | 14 × 9 = | |
| 44. | 126 ÷ 9 = | |
| | | |



Lesson 31: Explore and create unconventional representations of one-half.

Improvement: _____

B

Multiply or Divide by 9

| 1. | 1 × 9 = | |
|-----|----------|--|
| 2. | 2 × 9 = | |
| 3. | 3 × 9 = | |
| 4. | 4 × 9 = | |
| 5. | 5 × 9 = | |
| 6. | 27 ÷ 9 = | |
| 7. | 18÷9= | |
| 8. | 36 ÷ 9 = | |
| 9. | 9÷9= | |
| 10. | 45 ÷ 9 = | |
| 11. | 10 × 9 = | |
| 12. | 6 × 9 = | |
| 13. | 7 × 9 = | |
| 14. | 8 × 9 = | |
| 15. | 9 × 9 = | |
| 16. | 63 ÷ 9 = | |
| 17. | 54 ÷ 9 = | |
| 18. | 72 ÷ 9 = | |
| 19. | 90÷9= | |
| 20. | 81÷9= | |
| 21. | ×9=9 | |
| 22. | ×9 = 45 | |
| | | |

| 23. | ×9 = 18 | |
|-----|-----------|--|
| 24. | ×9 = 90 | |
| 25. | ×9=27 | |
| 26. | 18÷9= | |
| 27. | 9 ÷ 9 = | |
| 28. | 90 ÷ 9 = | |
| 29. | 45 ÷ 9 = | |
| 30. | 27 ÷ 9 = | |
| 31. | ×9=27 | |
| 32. | ×9=36 | |
| 33. | ×9=81 | |
| 34. | ×9=63 | |
| 35. | 72 ÷ 9 = | |
| 36. | 81 ÷ 9 = | |
| 37. | 54 ÷ 9 = | |
| 38. | 63 ÷ 9 = | |
| 39. | 11 × 9 = | |
| 40. | 99 ÷ 9 = | |
| 41. | 12 × 9 = | |
| 42. | 108 ÷ 9 = | |
| 43. | 13 × 9 = | |
| 44. | 117 ÷ 9 = | |



Lesson 31: Explore and create unconventional representations of one-half.

A

Mixed Multiplication

| 1. | 2 × 1 = | |
|-----|---------|--|
| 2. | 2 × 2 = | |
| 3. | 2 × 3 = | |
| 4. | 4 × 1 = | |
| 5. | 4 × 2 = | |
| 6. | 4 × 3 = | |
| 7. | 1 × 6 = | |
| 8. | 2 × 6 = | |
| 9. | 1 × 8 = | |
| 10. | 2 × 8 = | |
| 11. | 3 × 1 = | |
| 12. | 3 × 2 = | |
| 13. | 3 × 3 = | |
| 14. | 5 × 1 = | |
| 15. | 5 × 2 = | |
| 16. | 5 × 3 = | |
| 17. | 1 × 7 = | |
| 18. | 2 × 7 = | |
| 19. | 1 × 9 = | |
| 20. | 2 × 9 = | |
| 21. | 2 × 5 = | |
| 22. | 2 × 6 = | |

| 23. | 2 × 7 = | |
|-----|---------|--|
| 24. | 5 × 5 = | |
| 25. | 5 × 6 = | |
| 26. | 5 × 7 = | |
| 27. | 4 × 5 = | |
| 28. | 4 × 6 = | |
| 29. | 4 × 7 = | |
| 30. | 3 × 5 = | |
| 31. | 3 × 6 = | |
| 32. | 3 × 7 = | |
| 33. | 2 × 7 = | |
| 34. | 2 × 8 = | |
| 35. | 2 × 9 = | |
| 36. | 5 × 7 = | |
| 37. | 5 × 8 = | |
| 38. | 5 × 9 = | |
| 39. | 4 × 7 = | |
| 40. | 4 × 8 = | |
| 41. | 4 × 9 = | |
| 42. | 3 × 7 = | |
| 43. | 3 × 8 = | |
| 44. | 3 × 9 = | |



Lesson 32: Explore and create unconventional representations of one-half. B

Mixed Multiplication

Number Correct: _____

Improvement: _____

| 1. | 5 × 1 = | |
|-----|---------|--|
| 2. | 5 × 2 = | |
| 3. | 5 × 3 = | |
| 4. | 3 × 1 = | |
| 5. | 3 × 2 = | |
| 6. | 3 × 3 = | |
| 7. | 1 × 7 = | |
| 8. | 2 × 7 = | |
| 9. | 1 × 9 = | |
| 10. | 2 × 9 = | |
| 11. | 2 × 1 = | |
| 12. | 2 × 2 = | |
| 13. | 2 × 3 = | |
| 14. | 4 × 1 = | |
| 15. | 4 × 2 = | |
| 16. | 4 × 3 = | |
| 17. | 1 × 6 = | |
| 18. | 2 × 6 = | |
| 19. | 1 × 8 = | |
| 20. | 2 × 8 = | |
| 21. | 5 × 5 = | |
| 22. | 5 × 6 = | |

| 23. | 5 × 7 = | |
|-----|---------|--|
| 24. | 2 × 5 = | |
| 25. | 2 × 6 = | |
| 26. | 2 × 7 = | |
| 27. | 3 × 5 = | |
| 28. | 3 × 6 = | |
| 29. | 3 × 7 = | |
| 30. | 4 × 5 = | |
| 31. | 4 × 6 = | |
| 32. | 4 × 7 = | |
| 33. | 5 × 7 = | |
| 34. | 5 × 8 = | |
| 35. | 5 × 9 = | |
| 36. | 2 × 7 = | |
| 37. | 2 × 8 = | |
| 38. | 2 × 9 = | |
| 39. | 3 × 7 = | |
| 40. | 3 × 8 = | |
| 41. | 3 × 9 = | |
| 42. | 4 × 7 = | |
| 43. | 4 × 8 = | |
| 44. | 4 × 9 = | |



Lesson 32: Explore and create unconventional representations of one-half. Α

Number Correct: _____

| Mixed Division | | | |
|----------------|----------|--|--|
| 1. | 4 ÷ 2 = | | |
| 2. | 6 ÷ 2 = | | |
| 3. | 10 ÷ 2 = | | |
| 4. | 20 ÷ 2 = | | |
| 5. | 10 ÷ 5 = | | |
| 6. | 15 ÷ 5 = | | |
| 7. | 25 ÷ 5 = | | |
| 8. | 20 ÷ 5 = | | |
| 9. | 8 ÷ 4 = | | |
| 10. | 12 ÷ 4 = | | |
| 11. | 20 ÷ 4 = | | |
| 12. | 16 ÷ 4 = | | |
| 13. | 6 ÷ 3 = | | |
| 14. | 9 ÷ 3 = | | |
| 15. | 15 ÷ 3 = | | |
| 16. | 12 ÷ 3 = | | |
| 17. | 60 ÷ 6 = | | |
| 18. | 12 ÷ 6 = | | |
| 19. | 18 ÷ 6 = | | |
| 20. | 35 ÷ 7 = | | |
| 21. | 14 ÷ 7 = | | |
| 22. | 21 ÷ 7 = | | |

| 23. | 16 ÷ 8 = | |
|-----|----------|--|
| 24. | 40 ÷ 8 = | |
| 25. | 32 ÷ 8 = | |
| 26. | 56 ÷ 8 = | |
| 27. | 18 ÷ 9 = | |
| 28. | 45 ÷ 9 = | |
| 29. | 36 ÷ 9 = | |
| 30. | 63 ÷ 9 = | |
| 31. | 64 ÷ 8 = | |
| 32. | 48 ÷ 8 = | |
| 33. | 81 ÷ 9 = | |
| 34. | 54 ÷ 9 = | |
| 35. | 24 ÷ 6 = | |
| 36. | 16 ÷ 2 = | |
| 37. | 28 ÷ 7 = | |
| 38. | 27 ÷ 3 = | |
| 39. | 24 ÷ 8 = | |
| 40. | 32 ÷ 4 = | |
| 41. | 27 ÷ 9 = | |
| 42. | 72 ÷ 9 = | |
| 43. | 56 ÷ 7 = | |
| 44. | 72 ÷ 8 = | |



B

Mixed Division

Number Correct: _____

Improvement: _____

| 1. | 10 ÷ 5 = | |
|-----|----------|--|
| 2. | 15 ÷ 5 = | |
| 3. | 25 ÷ 5 = | |
| 4. | 50 ÷ 5 = | |
| 5. | 4 ÷ 2 = | |
| 6. | 6 ÷ 2 = | |
| 7. | 10 ÷ 2 = | |
| 8. | 8 ÷ 2 = | |
| 9. | 6 ÷ 3 = | |
| 10. | 9 ÷ 3 = | |
| 11. | 15 ÷ 3 = | |
| 12. | 12 ÷ 3 = | |
| 13. | 8 ÷ 4 = | |
| 14. | 12 ÷ 4 = | |
| 15. | 20 ÷ 4 = | |
| 16. | 16 ÷ 4 = | |
| 17. | 70 ÷ 7 = | |
| 18. | 14 ÷ 7 = | |
| 19. | 21 ÷ 7 = | |
| 20. | 30 ÷ 6 = | |
| 21. | 12 ÷ 6 = | |
| 22. | 18÷6= | |
| | | |

| 23. | 18÷9= | |
|-----|----------|--|
| 24. | 45 ÷ 9 = | |
| 25. | 27 ÷ 9 = | |
| 26. | 63 ÷ 9 = | |
| 27. | 16 ÷ 8 = | |
| 28. | 40 ÷ 8 = | |
| 29. | 24 ÷ 8 = | |
| 30. | 56 ÷ 8 = | |
| 31. | 81 ÷ 9 = | |
| 32. | 54 ÷ 9 = | |
| 33. | 64 ÷ 8 = | |
| 34. | 48 ÷ 8 = | |
| 35. | 30 ÷ 6 = | |
| 36. | 18 ÷ 2 = | |
| 37. | 35 ÷ 7 = | |
| 38. | 24 ÷ 3 = | |
| 39. | 32 ÷ 8 = | |
| 40. | 36 ÷ 4 = | |
| 41. | 45 ÷ 9 = | |
| 42. | 72 ÷ 8 = | |
| 43. | 49 ÷ 7 = | |
| 44. | 72 ÷ 9 = | |



Lesson 33: Solidify fluency with Grade 3 skills.

Α

Multiply and Divide

| 1. | 3 × 2 = | |
|-----|----------|--|
| 2. | 6 ÷ 2 = | |
| 3. | 5 × 3 = | |
| 4. | 15 ÷ 5 = | |
| 5. | 4 × 2 = | |
| 6. | 8 ÷ 4 = | |
| 7. | 3 × 3 = | |
| 8. | 9 ÷ 3 = | |
| 9. | 4 × 3 = | |
| 10. | 12 ÷ 4 = | |
| 11. | 5 × 5 = | |
| 12. | 25 ÷ 5 = | |
| 13. | 6 × 2 = | |
| 14. | 21 ÷ 7 = | |
| 15. | 7 × 4 = | |
| 16. | 16 ÷ 8 = | |
| 17. | 18÷3 = | |
| 18. | 18 ÷ 9 = | |
| 19. | 8 × 3 = | |
| 20. | 36 ÷ 9 = | |
| 21. | 14 ÷ 7 = | |
| 22. | 6 × 4 = | |

| 23. | 2 × 7 = | |
|-----|----------|--|
| 24. | 3 × 8 = | |
| 25. | 4 × 9 = | |
| 26. | 5 × 7 = | |
| 27. | 36 ÷ 6 = | |
| 28. | 42 ÷ 7 = | |
| 29. | 64 ÷ 8 = | |
| 30. | 45 ÷ 9 = | |
| 31. | 2 × 8 = | |
| 32. | 3 × 9 = | |
| 33. | 32 ÷ 4 = | |
| 34. | 45 ÷ 5 = | |
| 35. | 6 × 7 = | |
| 36. | 7 × 7 = | |
| 37. | 56 ÷ 8 = | |
| 38. | 63 ÷ 9 = | |
| 39. | 6 × 6 = | |
| 40. | 8 × 8 = | |
| 41. | 81 ÷ 9 = | |
| 42. | 49 ÷ 7 = | |
| 43. | 54 ÷ 6 = | |
| 44. | 56 ÷ 7 = | |



Lesson 34: Create resource booklets to support fluency with Grade 3 skills.

B

Multiply and Divide

Number Correct: _____

Improvement: _____

| 1. | 5 × 2 = | |
|-----|-----------------|--|
| 2. | 10 ÷ 2 = | |
| 3. | 2 × 3 = | |
| 4. | 6 ÷ 3 = | |
| 5. | 3 × 2 = | |
| 6. | 6 ÷ 2 = | |
| 7. | 4 × 4 = | |
| 8. | 16 ÷ 4 = | |
| 9. | 3 × 4 = | |
| 10. | 12 ÷ 3 = | |
| 11. | 3 × 3 = | |
| 12. | 9 ÷ 3 = | |
| 13. | 7 × 2 = | |
| 14. | 18 ÷ 6 = | |
| 15. | 6 × 4 = | |
| 16. | <u>18</u> ÷ 9 = | |
| 17. | 21 ÷ 3 = | |
| 18. | 16 ÷ 8 = | |
| 19. | 9 × 3 = | |
| 20. | 32 ÷ 8 = | |
| 21. | 12 ÷ 6 = | |
| 22. | 7 × 4 = | |

Т

٦

| 23. | 2 × 7 = | |
|-----|----------|--|
| 24. | 3 × 8 = | |
| 25. | 4 × 9 = | |
| 26. | 5 × 7 = | |
| 27. | 36 ÷ 6 = | |
| 28. | 42 ÷ 7 = | |
| 29. | 64 ÷ 8 = | |
| 30. | 45 ÷ 9 = | |
| 31. | 2 × 8 = | |
| 32. | 3 × 9 = | |
| 33. | 32 ÷ 4 = | |
| 34. | 45 ÷ 5 = | |
| 35. | 6 × 7 = | |
| 36. | 7 × 7 = | |
| 37. | 56 ÷ 8 = | |
| 38. | 63 ÷ 9 = | |
| 39. | 6 × 6 = | |
| 40. | 8 × 8 = | |
| 41. | 81 ÷ 9 = | |
| 42. | 49 ÷ 7 = | |
| 43. | 54 ÷ 6 = | |
| 44. | 56 ÷ 7 = | |



Lesson 34: Create resource booklets to support fluency with Grade 3 skills.