Unit 2: Extending the Number System

ccss	4 – Mastery	3 – Proficient	2 - Basic	1 – Below Basic	0 – No Evidence
Properties of rational		Explain how a radical	Show how a radical	Show how an	
exponents (N.RN.1)		expression can be	expression can be	expression can be	
		represented by	represented by	represented by	
	-	rational exponents	<u>rational</u> exponents	<u>integer</u> exponents	
Rational exponents		Convert between	Convert between	Convert between	
and radical		rational exponents	rational exponents	rational exponents	
expressions (N.RN.2)		and radical expressions Use the	and radical expressions	and radical expressions	
		properties of	expressions	expressions	
		exponents to rewrite	Use the properties of		
		(simplify) radical	exponents to rewrite		
		expressions	(simplify) radical		
			expressions (limited		
			to square roots and		
			cube roots)		
Irrational and		Justify <u>all</u> of the	Justify <u>two</u> of the	Justify <u>one</u> of the	
rational numbers		following:	following:	following:	
(N.RN.3)		When adding or	When adding or	<ul> <li>When adding or</li> </ul>	
		multiplying two	multiplying two	multiplying two	
		rational numbers	rational numbers	rational numbers	
		the result is a rational number	the result is a rational number	the result is a	
		When adding a	When adding a	rational number	
	Can extend thinking	rational number	rational number	When adding a	
	beyond the standard,	and an irrational	and an irrational	rational number and	
	including tasks that	number the result is	number the result is	an irrational	
	may involve one of the	irrational	irrational	number the result is	
	following:	<ul> <li>Multiplying a</li> </ul>	<ul> <li>Multiplying a</li> </ul>	irrational	
		nonzero rational	nonzero rational	Multiplying a	Little evidence of
	Designing	number and an	number and an	nonzero rational number and an	reasoning or
	Connecting	irrational number	irrational number	irrational number	application to solve
	Synthesizing	the result is	the result is	the result is	the problem
	Applying	irrational	irrational	irrational	Does not meet the
Operating on	Justifying	Add, subtract, and	Add, subtract, and	Add and subtract	criteria in a level 1
polynomials		multiply polynomials	multiply polynomials	polynomials	criteria ili a lever 1
(A.APR.1)	Critiquing	all within the same			
	Analyzing	<u>problem</u>			
Represent parts as a	Creating	Interpret the growth	Interpret the growth	Interpret the growth	
single entity	<ul><li>Proving</li></ul>	rate and the growth	rate of exponential	rate of exponential	
(A.SSE.1b)		<u>factor</u> of exponential	functions in context of	functions in context of	
		functions in context of the situation	the situation	the situation	
Use structure to	-	Rewrite expressions in	Rewrite expressions in	Rewrite expressions in	
identify (A.SSE.2)		different equivalent	different equivalent	different equivalent	
		forms by:	forms by (3 out of 4):	forms by (2 out of 4):	
		<ul> <li>Factoring using</li> </ul>	Factoring using	Factoring using	
		greatest common	greatest common	greatest common	
		factors	factors	factors	
		Factor using a	Factor using a	Factor using a	
		difference of two	difference of two	difference of two	
		squares	squares	squares	
		Factor a trinomial	Factor a trinomial	Factor a trinomial	
		Factor a trinomial     with more than 2	Factor a trinomial     with more than 3	Factor a trinomial     with more than 2	
		with more than 2 factors	with more than 2 factors	with more than 2 factors	
Definition of complex	1	Use the relation i^2= –	Use the relation i^2= –	Use the relation i^2= –	
number (N.CN.1)		1 and the properties	1 and the properties	1 and the properties	
		of operations to add,	of operations to add,	of operations to add	
Operations with i		subtract and multiply	subtract and multiply	and subtract complex	
(N.CN.2)		complex numbers and	complex numbers and	numbers, <u>but does</u>	
		write the solution in	write the solution in	not write all solutions	
		standard form	standard form	in standard form	