| Algebra 2 U | nit 1 Re | eview Gu | uide |
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Hour

## Number System



Name all the number sets each number is in  $\in$  {N, W, Z, Q, Q', R, I, and/or C} for Numbers 1-3

1. 
$$\frac{34}{-2}$$
: -17  $\frac{34}{-2}$   $\in \{ \mathbb{Z}, \mathbb{Q}, \mathbb{R}, \mathbb{C} \}$  2.  $4\sqrt{-49}$ :  $4\sqrt{-49} \in \{ \mathbb{Z}, \mathbb{C} \}$ 

3. If you are only to get Natural number answers, and you got 1.3 as your answer, could you have done the No 1.3 is Rational, Natural #s are problem correctly? Explain. Counting numbers

Simplify each expression for Numbers 4-6 (Show work steps to earn credit)

4. 
$$10(11-2^{4}) \div 4$$
 $10(11-16) \div 4$ 
 $10(-5) \div 4$ 
 $10(-$ 

5. 
$$\frac{5 + (6 - 10 + 3)^3}{(-1)^2} + 2$$

$$5. \frac{3(6 + 6 + 3)^{2} + 2}{(-1)^{2}} + 2$$

$$(11 - 16) \div 4$$

$$5 + (-4 + 3)^{2} + 2$$

$$5 + (-1)^{3} + 2$$

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$$6 + (-1)^{3} + 2$$

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$$7 + (-1)^{3} + 2$$

$$8 + (-1)^{3} + 2$$

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$$9 + ($$

$$\frac{5+(6-10+3)^{3}}{(-1)^{2}} + 2 \qquad 6. \quad \frac{2}{3}\sqrt{-2^{3} \div 8 \cdot -4} - \frac{4}{15}$$

$$\frac{5+(-4+3)^{3}}{1} + 2 \qquad \frac{2}{3}\sqrt{-8-8} \cdot -4 - \frac{4}{15}$$

$$\frac{5+(-1)^{3}}{1} + 2 \qquad \frac{2}{3}\sqrt{-1-4} - \frac{4}{15}$$

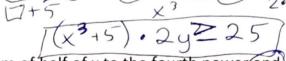
$$\frac{2}{3}\sqrt{-1-4} - \frac{4}{15}$$

$$\frac{2}{3}\sqrt{4} - \frac{4}{15}$$

$$\frac{2}{3}$$
,  $\frac{2}{15}$   $\frac{4}{15}$   $\frac{4}{15}$ 

Write the Algebraic expression for...

7. The product of 5 more than a number cubed and twice a different number is at least 25



8. The negative sum of half of x to the fourth power and eight has the same outcome as the difference of y with a coefficient of -9 and the quotient of thirty and  $x = \frac{1}{2}$ 

## **Polynomial Parts**

$$-(\pm x^{4}+8)=-9y-\frac{30}{x}$$

9. Write a Quartic 4 term polynomial that has a leading coefficient of -1.3, a constant that is 21, and that is in standard form.

10. Name the following for this polynomial 
$$22x - 15x^2 + 61$$

| Standard Form | Lead Coefficient | Constant | Names (by degree and #of terms) |
|---------------|------------------|----------|---------------------------------|
| -15x2+22x+61  | -15              | 61       | Quadratic<br>Trinomial          |