Name: _____          Date: _____

# UNIT #1 –REVIEW SHEET. YES!

**Part I Questions:**

1.  Which of the following is the value of the expression $2x^2 + 1$ when $x = -2$?

    (1) $-7$                        (3) $-15$

    (2) 17                          (4) 9

2.  Which equation below illustrates the associative property of addition?

    (1) $(2+8)+(1+9)=(8+2)+(9+1)$        (3) $5+2(3+4)=5+6+8$

    (2) $5(2+7)=10+35$                    (4) $(3+7)+2=3+(7+2)$

3.  Which expression below is equivalent to $10x-35$?

    (1) $5(2x-7)$                   (3) $10(x-5)$

    (2) $x(10-35)$                  (4) $10(x-35)$

4.  The product of the binomial $(3x+2)$ with the binomial $(2x-1)$ can be written equivalently as

    (1) $5x+1$                      (3) $6x^2+x-2$

    (2) $6x-3$                      (4) $6x^2-2$

5.  Written in simplest exponential form the product $(3x^7)(-2x^3)$ is?

    (1) $-5x^2$                     (3) $x^4$

    (2) $-6x^{10}$                  (4) $-6x^{21}$

6. What is the first step in simplifying the expression $(2-3 \times 4+5)^2$
1) square 5
2) add 4 and 5
3) subtract 3 from 2
4) multiply 3 by 4

7. Which of the following is equivalent to $(x+5)^2$ ?

(1) $x^2 +10x+25$        (3) $2x+25$

(2) $x^2 +25$        (4) $2x+10$

8. If the expression $3-4^2 + \dfrac{6}{2}$ is evaluated, what would be done *last*?
1) subtracting
2) squaring
3) adding
4) dividing

9. Which number is rational?
1) $\pi$
2) $\dfrac{5}{4}$
3) $\sqrt{7}$
4) $\sqrt{\dfrac{3}{2}}$

10. Which is an irrational number?
1) 0
2) $\pi$
3) $-\dfrac{1}{3}$
4) $\sqrt{9}$

11. It takes a snail 500 hours to travel 15 miles. At this rate, how many hours will it take the snail to travel 6 miles?
1) 0.18
2) 5.56
3) 150
4) 200

**Free Response Questions:**

12. What is the value of the expression $-3x^2y + 4x$ when $x = -4$ and $y = 2$?

13. Multiply and write an expression that is equivalent to $(2x+5)(3x-2)$.

14. Write the following expression in simplest form.

$$4(3x-2)-2(4x+5)$$

15. Consider the binomial expression $3x+1$.

(a) What property is illustrated in the identity shown below?

$$2(3x+1)=6x+2$$

(b) What property is illustrated in the identity shown below?

$$6x+(2+3)=(6x+2)+3$$