

Unit 1 Test Review:

1) Simplify:  $(-2x^3y^2z)^5(3x)$  =  $\boxed{-96x^{16}y^{10}z^5}$

$(-2^5x^{15}y^{10}z^5)(3x)$

$(-32x^{15}y^{10}z^5)(3x)$

$(-32 \cdot 3)(x^{15} \cdot x)(y^{10})(z^5)$

2) Simplify:  $6x - 4 - 2(2x + 4) - 2x$   $\boxed{-12}$

$6x - 4 - (4x + 8) - 2x$

$(6x - 4x - 2x) = 0x$

$(-4 - 8) = -12$

3) Evaluate:  $\left(\frac{2}{5}\right)^4$  Your answer should be in fraction form.

$\frac{2^4}{5^4}$

$\boxed{\frac{16}{625}}$

5. Zack went to a baseball game with his friend, Luke. Zack bought  $h$  hotdogs at the concession stand, and Luke bought 2 less hotdogs than Zack. Write an expression represents the number of hotdogs that Luke bought?

~~$h - 2$~~

than: switch work

6. Simplify:  $2 + 3(x - 4) + 3(2x - 1)$

(Group)  $2 + (3x - 12) + (6x - 3)$   
 combine like terms  $\left\{ \begin{array}{l} (3x + 6x) = 9x \\ (2 - 12 - 3) = -13 \end{array} \right.$

$\boxed{9x - 13}$

7. Simplify:  $\frac{x^7y^2}{x^5}$

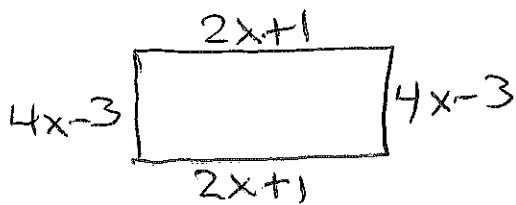
$7 - 5 = 2$

$\boxed{x^2y^2}$

8. Simplify:  $\frac{x^2 y^2}{x^2}$

$$\frac{x^2}{y^2}$$

9. Find the perimeter of a rectangle with a base of  $2x+1$  and a height of  $4x-3$ .



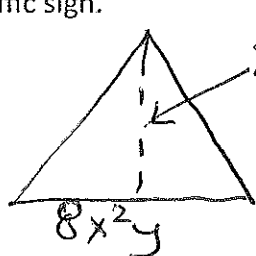
$$P = 2L + 2W$$

$$P = 2(2x+1) + 2(4x-3)$$

$$(4x+2) + (8x-6)$$

$$12x-4$$

10. A triangular traffic sign has a base of  $8x^2y$  inches and a height of  $2xy^2$  inches. Find the area of the traffic sign.



$$A = \frac{1}{2}bh$$

Group

$$\frac{1}{2}(8)(2)$$

$$(x^2 \cdot x)(y \cdot y^2)$$

$$8x^3y^3$$

11. Evaluate  $\frac{x+y}{x}$  if  $x=-2$  and  $y=8$

$$\frac{-2+8}{-2} = \frac{6}{-2}$$

$$-3$$

12. Evaluate  $xy+4$  if  $x=8$  and  $y=-3$

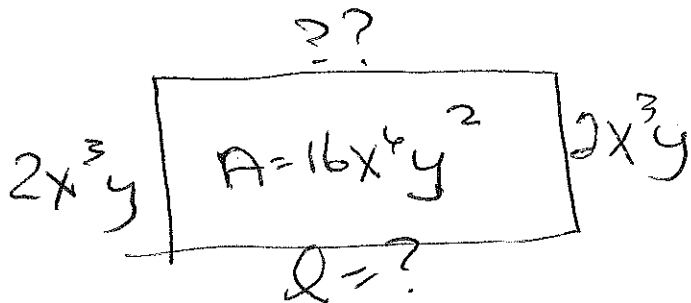
$$8(-3)+4$$

$$-24+4$$

$$-20$$

$$-20$$

14. A rectangular billboard sign has an area of  $16x^6y^2$  square feet and a height of  $2x^3y$  feet. What is the length of the base of the billboard?



$$A = Lw$$

$$L = \frac{A}{w}$$

$$\frac{16x^6y^2}{2x^3y}$$

$$8x^3y$$