Warm-Up

Simplify the expression using only positive exponents.

$$\frac{9x^5y^{-1}}{81x^{-2}y^2}$$

A $9x^7y$

B $9x^3y^3$

C $\frac{x^7}{9y^3}$ *(circled)*

D $\frac{x^3}{y}$

Handwritten: $\frac{1x^7}{9y^3}$ $5+2$ $-1-2=y^{-3}$

Factor.

$$x^2 - 11x + 24$$

A $(x + 8)(x + 3)$

B $(x - 8)(x + 3)$

C $(x + 8)(x - 3)$

D $(x - 8)(x - 3)$ *(circled)*

Handwritten box:

	x	8
x	x^2	$8x$
3	$3x$	24

Which of the following is the midpoint of $(4, 8)$ and $(-2, 1)$?

A $\left(3, \frac{7}{2}\right)$

B $\left(1, \frac{9}{2}\right)$ *(circled)*

C $\left(3, \frac{9}{2}\right)$

D $\left(6, -\frac{1}{2}\right)$

Handwritten: $\frac{x+x}{2}$ $\frac{4+-2}{2} = \frac{2}{2}$

EOC Review Part 1 - Worksheet (no calculators/computers).

Name _____Key_____

EOC Review Part 1

1. Anton joined a golf club two years ago. He pays an annual membership fee of $895 and a greens fee of $30 each time he plays a game of golf. The function below can be used to calculate the total yearly golfing fee, f (g), in dollars.

f (g) = 895 + 30g, where g represents the number of times he played golf during the year. Last year he paid $2,065 as a total golfing fee. For how many games did he pay a greens fee?

$$2065 = 895 + 30g$$
$$-895 \quad -895$$
$$\frac{1170}{30} = \frac{30g}{30}$$
$$\boxed{39} \text{ games}$$

2. For the function f(x) = 3x + 2, find x such that f(x) = 14.

$$14 = 3x + 2$$
$$-2 \qquad -2$$
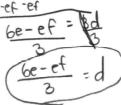$$\frac{12}{3} = \frac{3x}{3}$$
$$\boxed{4} = x$$

not y-int

3. Gregory teaches martial arts. He charges a one-time processing fee of $5.00 and the cost of the classes is shown below. Let x represent the number of classes and y represent the cost of classes. Based on this information, what will it cost to take 10 classes?

Cost of classes (not including processing fee)

Number of classes, x	1	2	3	4
Cost of classes, y	15.00	27.00	39.00	51.00

0

3 ÷ 5 ÷ 12

12   12

$$y = 12x + 3$$
$$12(10) + 3$$
$$123$$
$$+ 5$$
$$\boxed{\$128}$$

4. Solve the equation. −4(x + 10) − 6 = −3(x − 2)

$$-4x - 40 - 6 = -3x + 6$$
$$-4x - 46 = -3x + 6$$
$$+4x - 6 \quad +4x - 6$$
$$\boxed{-52} = x$$

5. Solve for d in the equation 6e = ef + 3d?

$$-ef \quad -ef$$

$$\frac{6e - ef}{3} = \frac{3d}{3}$$

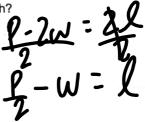$$\boxed{\frac{6e - ef}{3} = d}$$

$$\frac{-ef + 6e}{3}$$

6. The formula for the perimeter P of a rectangle with length l and width w is $P = 2l + 2w$. Write a formula for the length of a rectangle in terms of the perimeter and width?

$$P = 2l + 2w$$
$$-2w \quad -2w$$
$$\frac{P - 2w}{2} = \frac{2l}{2}$$

$$\boxed{\frac{P - 2w}{2} = l}$$
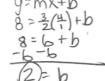
$$\frac{P - 2w}{2} = \frac{2l}{2}$$

$$\frac{P}{2} - w = l$$

7. How many liters of a 10% silver iodide solution must be mixed with 9 liters of a 4% silver iodide solution to get a 6% solution?

amt	%
x	10
9	4
x+9	6

$$10x + 36 = 6(x + 9)$$
$$10x + 36 = 6x + 54$$
$$-6x - 36 \quad -6x - 36$$
$$\frac{4x}{4} = \frac{18}{4}$$
$$x = \boxed{4.5} \text{ L}$$

8. Mia is a sales associate at an art gallery. Each week she earns $300 plus a 4% commission of all her sales. This week she earned $327. How much were Mia's art sales this week?

$$300 + .04x = 327$$
$$-300 \qquad -300$$
$$\frac{.04x}{.04} = \frac{27}{.04}$$
$$x = \boxed{675}$$

9. What is the y-coordinate of the y-intercept of the line that passes through the points (−4, −4) and (4, 8)?

$$(4, 8)$$
$$(-4, -4)$$
$$\frac{8 - -4}{4 - -4} = \frac{12}{8} = \frac{3}{2} \quad m$$

$$y = mx + b$$
$$8 = \frac{3}{2}(4) + b$$
$$8 = 6 + b$$
$$-6 \quad -6$$
$$\boxed{2} = b$$

$$y = \frac{3}{2}x + 2$$

10. Write an equation in standard form for the line passing through the points (3, 2) and (−9, 6)?

10. Write an equation in standard form for the line passing through the points (3, 2) and (–9, 6)?

$(3, 2)$
$(-9, 6)$

$\dfrac{2-b}{3--9} = \dfrac{-4}{12} = \dfrac{-1}{3}$ m

$2 = -\frac{1}{3}(3) + b$
$2 = -1 + b$
$\underline{+1 \quad +1}$
$3 = b$

$y = -\frac{1}{3}x + 3$

$3\left(\frac{1}{3}x + y = 3\right)$

$x + 3y = 9$

11. Write an equation of the line passing through the point (4, –16) and is perpendicular to the line

$y = -\frac{2}{3}x + 8$ $m = \frac{3}{2}$

$-16 = \frac{3}{2}(4) + b$
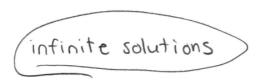$-16 = 6 + b$
$\underline{-6 \quad -6}$
$-22 = b$

$y = \frac{3}{2}x - 22$

12. Determine the number of solutions based on the graph for the following system of equations.

$2x + 5y = 7$ and $\dfrac{10y}{10} = \dfrac{-4x}{10} + \dfrac{14}{10}$

$\dfrac{5y}{5} = \dfrac{-2x}{5} + \dfrac{7}{5}$

$y = \frac{-2}{5}x + \frac{7}{5}$ $y = \frac{-2}{5}x + \frac{7}{5}$

infinite solutions

Boom Card Algebra 1 Review