

Name _____

Term 1 Practice Questions

1) What is the slope of a line that passes through the points (3, 5) and (6, 15)?

$$a = \frac{10}{3} \text{ or } 3.333$$

2) What is the equation of a line that passes through the points (2, 6) and (6, 12)?

$$y = 1.5x + 3$$
$$\text{or } y = \frac{6}{4}x + 3$$
$$\text{or } y = \frac{3}{2}x + 3$$

3) What is the equation of a line that with a slope of 3 and an initial value of -4 ?

$$y = 3x - 4$$

4) What is the equation of a line with a slope of $\frac{1}{4}$ and that passes through the point (4, -3)?

$$y = \frac{1}{4}x - 4$$
$$\text{or } y = 0.25x - 4$$

5) Solve the following equations for x.

a) $3x - 2 = 10$

$x = 4$

b) $2(x - 4) = 3(x + 12)$

$x = -44$

6) William collects stuffed dinosaurs and stuffed bears. William has twice as many dinosaurs as bears.

William has a total of 105 stuffed animals.

Translate this scenario into equations.

X: # of dinosaurs

Y: # of bears

$x = 2y$

$x + y = 105$

7) A group of students sold cookies and cupcakes to raise money for school activities.

The profit for each cookie is \$0.50. The profit for each cupcake is \$1.50.

The students sold 4 times as many cookies as cupcakes.

By selling the cookies and cupcakes, they made a profit of \$7 700.

Let x be the number of cookies sold

Let y be the number of cupcakes sold.

Which of the following systems of equations represents this situation?

A) $x = 4y$
 $0.5x + 1.5y = 7\,700$

B) $x = 4y$
 $1.5x + 0.5y = 7\,700$

C) $4x = y$
 $0.5x + 1.5y = 7\,700$

D) $4x = y$
 $1.5x + 0.5y = 7\,700$

8) An art supply store sells bottles and tubes of paint.

- The cost of each bottle of paint is the same
- The cost of each tube of paint is the same
- Three times the cost of a bottle of paint is \$17 more than the cost of a tube of paint
- The total cost of 11 bottles and 4 tubes is \$110.25

Zoe bought 3 bottles and 7 tubes of paint. What was the total cost of Zoe's purchase?

The cost of Zoe's purchase is \$129

9) Where do the following lines intersect?

$$y = 2x + 4$$
$$y = -5x + 11$$

The lines intersect at the point (1, 6)

10) Three groups of friends went to the movie theater. The theater sells small and large popcorn. The table below provides information on the sales.

	Number of small popcorns purchased	Number of large popcorns purchased	Total cost
Group 1	3	5	\$84.00
Group 2	6	2	\$72.00
Group 3	4	3	?

How much did Group 3 pay for their popcorn?

The group paid \$68.

11) Given $y = 3x + 4$, solve for y when $x = 5$

$y = 19$

12) Given $3x + 4y = 5$, solve for x when $y = 5$

$x = -5$