

MATHEMATICS 10
Review Assignment

Name: _____

1. Simplify:

a) $7y^2 - 14y + 19y - 3y^2$

b) $3y^2 + 4y^3 - 2y^2 + y - 5y^3$

c) $5y + 6(3 - y)$

d) $(3y - 2) - (y - 5)$

2. Solve for y and check:

a) $3y - 5 = 13$

b) $\frac{y}{12} - 2 = 4$

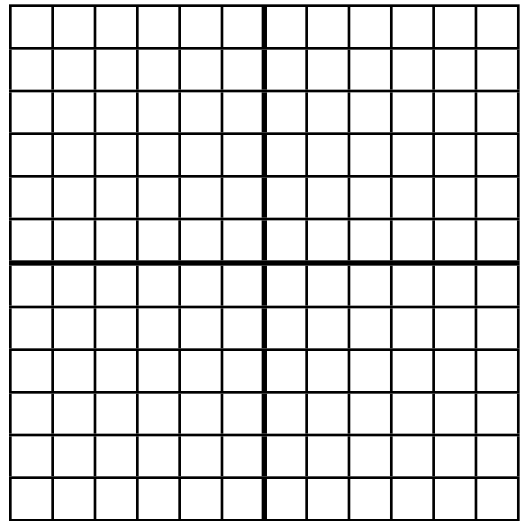
3. Simplify.

a) $3x^2y(5x^4y^3z)$

b) $-(3xy^3z^4)^2$

4. Graph the following linear equation:

$$y = -\frac{3}{5}x + 2$$



5. Translate each sentence into an equation.

- a) Seven more than half a number is twelve _____
- b) A number decreased by nine gives the same result as three times that number

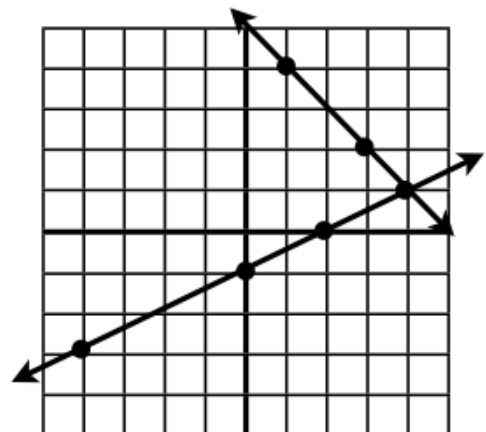
- c) Mr. T has quarters and dimes in his pocket that total \$2.75.

6. Provide the solution for the linear systems that are **graphed**.

$$x - y = -5$$

$$x + y = -1$$

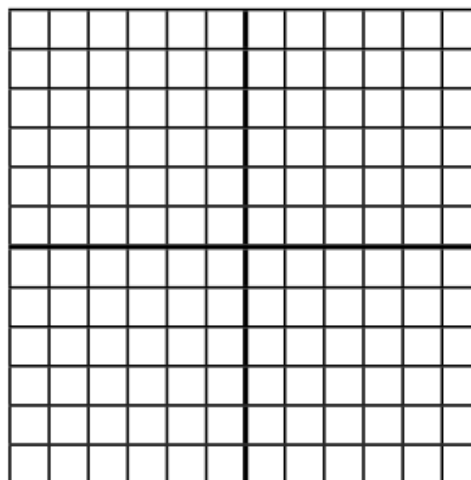
Solution _____



7.

- a) Solve the system by **graphing**. Your choice of graphing method.

$$\begin{aligned} 2x + 1 &= y \\ -x - y + 4 &= 0 \end{aligned}$$



- b) Verify that your point of intersection is the correct one. (Check)

8. Solve the system by ***substitution***. Check your solution.

$$2x - 13 = y$$

$$x + 2y = -6$$

9. Without graphing or solving the linear system, determine whether these systems have one solution, no solution or infinitely many solutions. Explain your answer.

$$y = \frac{-5x}{3} + 10$$

$$3y + 5x = 40$$

10. Sam and Ben each own a backyard poop and scoop clean-up service for dogs. Sam charges \$30 and \$2.50 per poop-and-scoop and Ben charges \$23 and \$2.75 per poop-and-scoop.

1. a) Write an equation for the cost of Ben's service _____
2. b) Write an equation for the cost of Sam's service _____
3. c) Determine at how many poop-and-scoops a home visit would be the same cost for the two services. Show your work.

of poop-and-scoops that the cost would be the same _____

4. d) If there were 26 poop-and-scoops in your backyard which service would be the most economical to hire and how much would it actually cost?

Service _____ Cost _____