

Solve Equations

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

2. $-\frac{3}{4}x - 2 = 25$

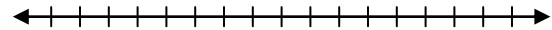
3. $3(2x-1) + 5 - 2x = 5 - (6x-17)$

4. $.05x + .25(2x-3) = 6.40$

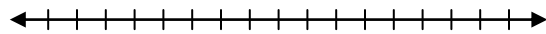
Solve and Graph Inequalities on a Number Line.

Solve the following inequalities and graph the solution set on a number line. Test one possible solution.

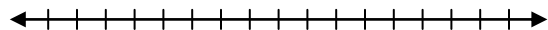
5. $3(2x-5) + 8 \leq 12 - (x-2)$



6. $-3(5x-6) + 12 > -4 - (2x+5)$



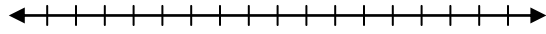
7. $8y - (3y+3) < 11 + 4(3y-9) - 6$



Solve Absolute Value Equations

Solve the following absolute value equations. Then graph the solution set on a number line.

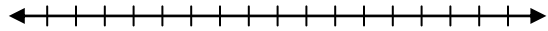
8. $|z + 6| - 3 = 4$



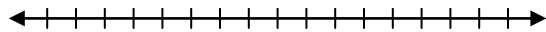
Solve Absolute Value Inequalities

Solve the following absolute value inequality. Then graph the solution set on a number line.

9. $|2x + 3| < 15$



10. $|-2x + 2| > 10$



Proportional Reasoning

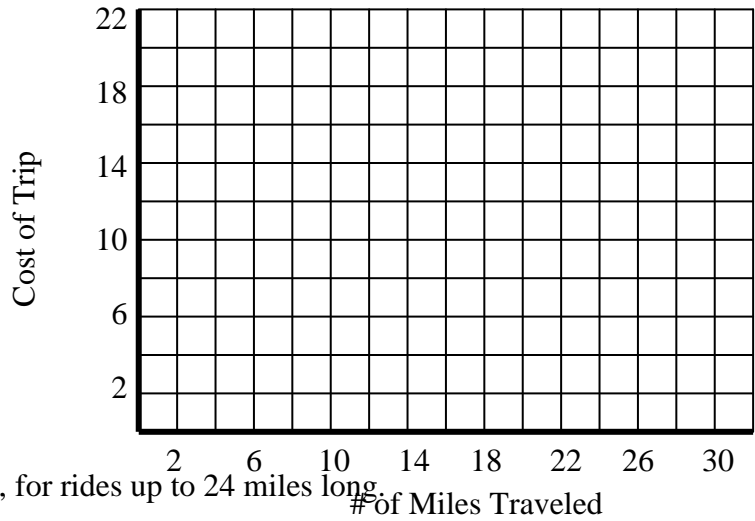
11. $\frac{3}{5x - 2} = \frac{4}{8x + 7}$

12. If 1 gallon of paint covers 450 sq ft, how many gallons are needed to paint a room with 675 sq ft of wall surface?

1st Semester Final Exam Review, Part 2

Graph and Interpret Linear Functions

13. A radio-dispatched taxi company charges \$4.00 to pick up a passenger, then adds \$.75 per mile traveled to the destination.
 The function that represents this situation is:
 $C(m) = 0.75m + 4.00$, where C represents the total cost and m represents the number of miles traveled.



Draw a graph that shows how much it will cost to hire this company, for rides up to 24 miles long.

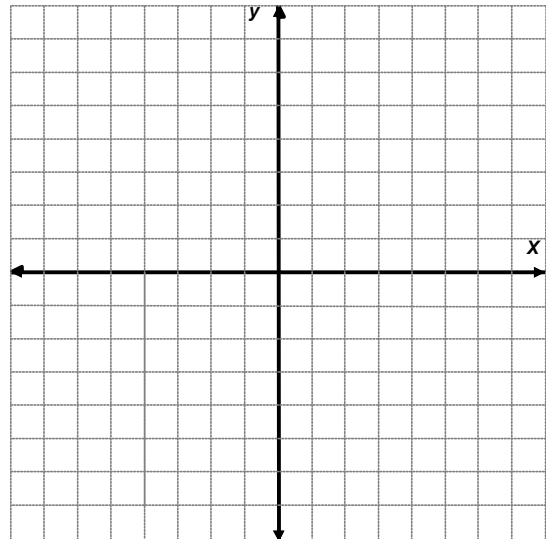
Use your graph to estimate how far you can travel for \$19. **Clearly show your solution on the graph and state it below.**

m	$C(m) = 0.75m + 4.00$	C
0		
6		
14		
18		
24		

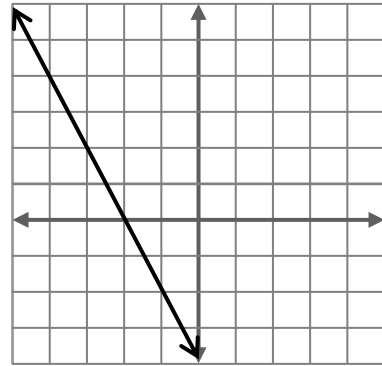
Graph linear equations

14. Write the following equation in slope-intercept form and graph.

$$4x - 5y = 20$$



15. Find the equation of the line in slope-intercept form.



Write the Equation of a Line between Two Points

Given the slope and a point on the line or two points, write the equation in *slope-intercept* form.

16. $(1, 2)$ and $(-2, 5)$

17. $m = \frac{1}{2}, (-4, 3)$

Write an equation of a parallel and/or perpendicular line given an equation and a point.

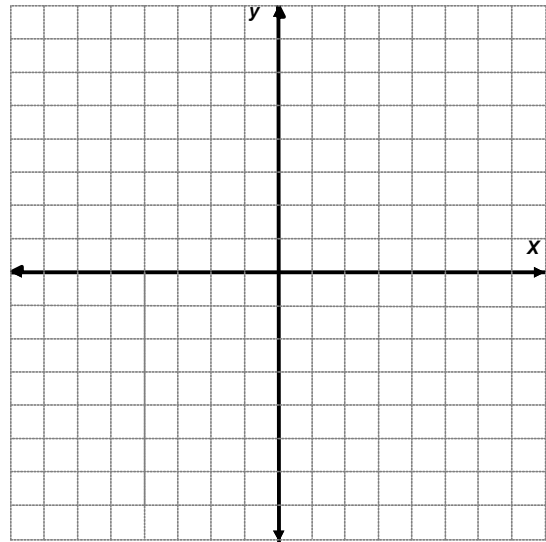
18. Write the equation of a line parallel to $2x + 3y = 12$ that passes through the point $(-3, 4)$.

19. Write the equation of a line perpendicular to $y = 3x + 4$ that passes through the point $(6, -4)$.

Solve a System by Graphing

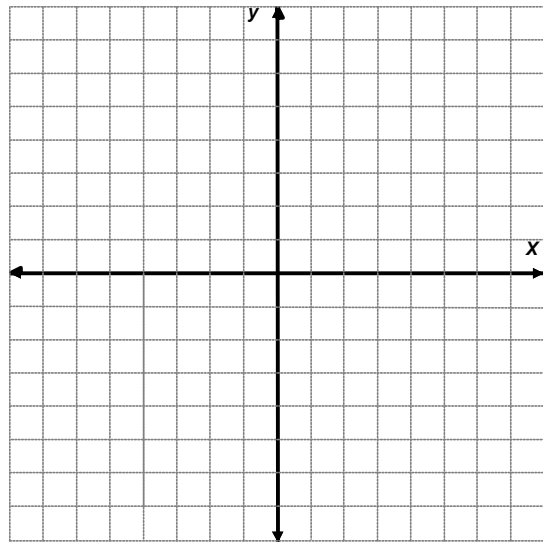
Solve the system by graphing. Identify the point of intersection on your graph and check your solution.

20. $y = -x - 1$
 $y = x + 1$



Solve the system by graphing. Identify one possible solution on your graph and check.

21. $x - 2y \leq -4$
 $4y < 2x - 4$



Solve a System of Linear Equations Algebraically

Solve the system of equations by the algebraic method of your choice. Check your solution.

22. $d = 2c + 9$
 $c + 2d = 8$

23. $3x + 5y = 2x$
 $x + 3y = y$

24. $5m + 2n = -8$
 $4m + 3n = 2$

25. $2x - 2y = -15$
 $x = 5 - 4y$