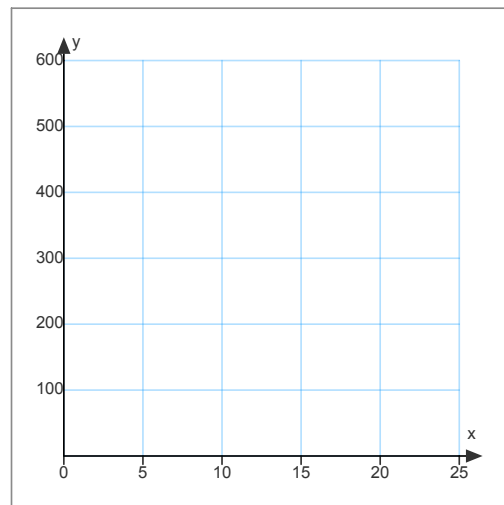


Alg 1 Tuesday Week 12 Warm-up

Skill 5: Evaluate and Graph a Function.

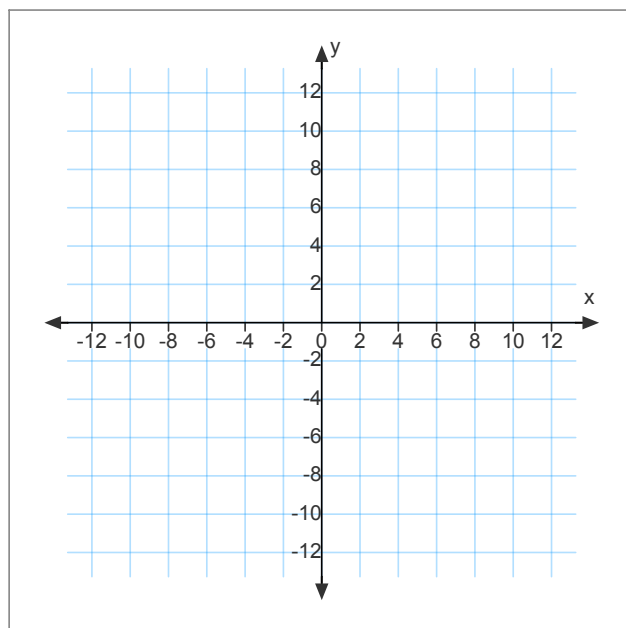
The cost,  $d$ , in dollars, for a parking pass depends on the number of whole weeks  $w$  you purchase. This situation is represented by the function rule  $d = 25w$ . Make a table and graph, and then use the graph to determine how many weeks you may purchase for \$438.

w	d



Skill 6: Graph a linear equation.

$$y = -3x + 2$$



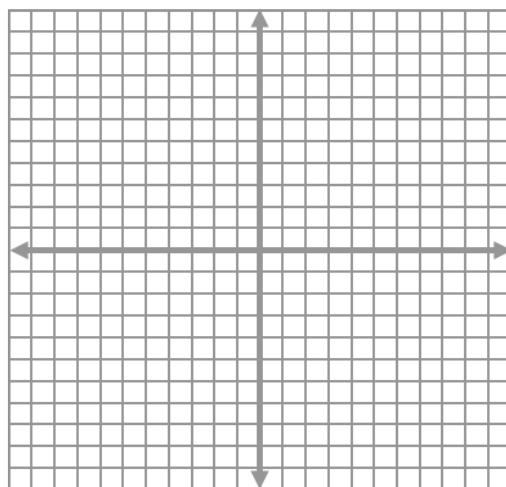
## Notes

Example 1: Graph each line on the same grid:

a.  $y = \frac{1}{2}x - 3$

b.  $y = \frac{1}{2}x + 5$

c.  $y = -2x - 1$



- d. What do you notice about the graphs of lines *a* and *b*?
- e. What do you notice about the slopes of lines *a* and *b*?
- f. What do you notice about the graphs of lines *a* and *c*?
- g. What do you notice about the slopes of lines *a* and *c*?

Wk 12 Tuesday

## Notes on Parallel and Perpendicular Lines

Parallel lines have the \_\_\_\_\_ slope as each other.

Perpendicular lines have slopes that are the \_\_\_\_\_ of each other. That means, when the 2 slopes are multiplied together it = \_\_\_\_\_

Example:

SKILL 8: Writing the equation of a line parallel/perpendicular to a given line:

Ex. 1: Write the equation of a line parallel to  $y = -1/2x + 4$  passing through  $(-6, 1)$ .

Our line is to be parallel to this one so we want our slope to be \_\_\_\_\_ and we need to use the point  $(-6, 1)$ .

Use  $y = mx + b$  with the slope = \_\_\_\_\_ and point  $( , )$

Ex. 2 Write the equation of a line perpendicular to  $y = -1/2x + 4$  passing through  $(-6, 1)$ .

Our line is to be perpendicular to this one so we want our slope to be \_\_\_\_\_ and we need to use the point  $(-6, 1)$ .

Use  $y = mx + b$  with the slope = \_\_\_\_\_ and point  $( , )$

Ex. 3. Determine whether the given equations are parallel, perpendicular, or neither. Explain .

Line A:  $y - 3x = 2$

Line B:  $y = -3x - 6$

Line C:  $3y - x = -24$

Compare Line A & B:

Compare Line A & C:

Compare Line B & C:

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Determine whether the graphs of the given equations are *parallel*, *perpendicular*, or *neither*. Explain.

 See Problem 2.

13.  $y = x + 11$

$y = -x + 2$

14.  $y = \frac{3}{4}x - 1$

$y = \frac{3}{4}x + 29$

15.  $y = -2x + 3$

$2x + y = 7$

16.  $y - 4 = 3(x + 2)$

$2x + 6y = 10$

17.  $y = -7$

$x = 2$

18.  $y = 4x - 2$

$-x + 4y = 0$

Write an equation in slope-intercept form of the line that passes through the given points.

 See Lesson 5-3.

44. (1, 1), (3, 7)

45. (2, 5), (12, 1)

46. (0.5, 2), (4.5, 3)

47. (13, 20), (6, 60)