**Linear Relations Review Package**

1. What is the slope of each line below? Is it a positive or negative slope?
2. Slope: b) Slope:

Positive Negative Positive Negative

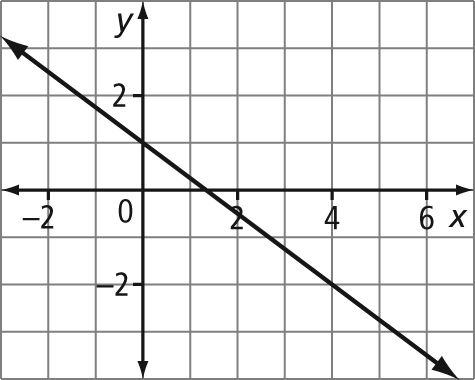
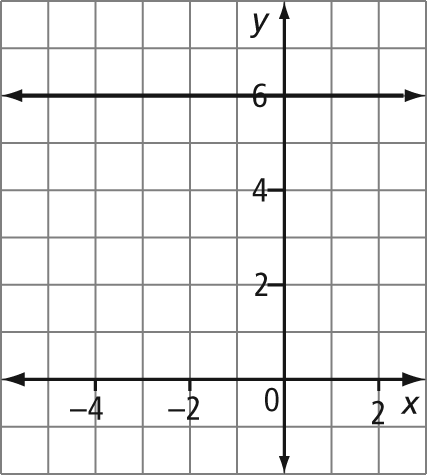


1. For the next two questions, choose the correct answer: A,B,C, or D





1. The x-intercept of the graph of 5x – 3y – 15 = 0 is
2. The slope of the graph of the relation x = y + 2 is
3. The y-intercept of the graph of the line y – 3 = (x + 10) is .
4. Write out the equation of each line below in slope-intercept form.

a)  b)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Match each of the equations below with its graph. Justify each choice



Equation:

Justification



Equation:

Justification



Equation:

Justification

1. Identify the slope of a line parallel to each given line.

a) y = x + 9

b) 4x + 6y = 20

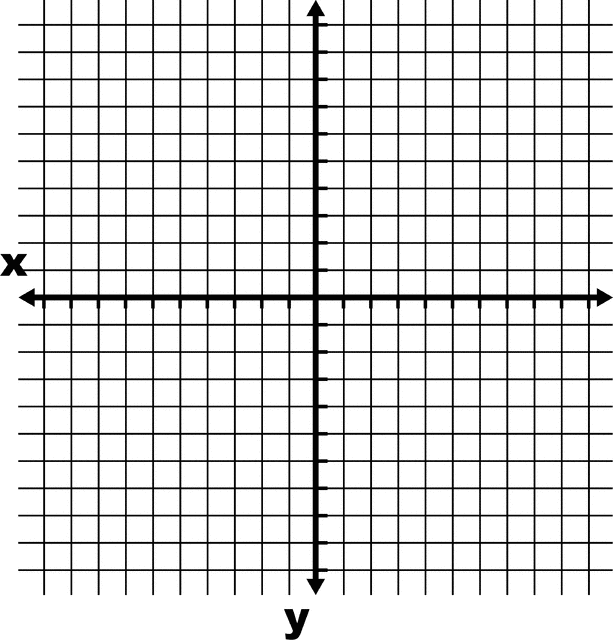
1. Identify the slope of a line perpendicular to each given line.

a) y = 2x – 4

b) 3x + 5y = 35

1. a) Graph each line below. Make sure you label each line.





1. Determine the equation of the line that is parallel to the line with the equation , and passes through A(6,2). Explain how you know your equation is correct.
2. Determine an equation of the line that is perpendicular to the line with equation and passes through B(-1 , 2). Write the new equation in general form.
3. Write the equation of each line in the form that you think best describes the line



**Extended Response**

12. A hot-air balloon is rising at a constant rate of 0.75 m/s. The equation that represents the height of the balloon, h, in metres, as a function of time, t, in seconds, is  
h = 0.75t + 3.

a) What does the h-intercept of the graph of the relation represent?

b) How high will the balloon be after 20 s?

c) How long will it take the balloon to reach a height of 15 m?