

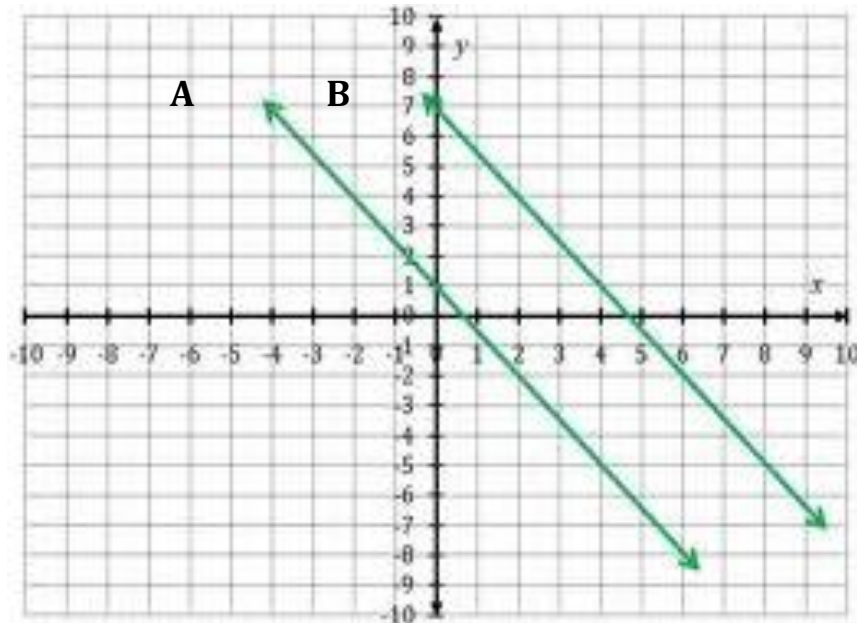
Name: \_\_\_\_\_

Block: \_\_\_\_\_

## Writing Linear Equations – Point and Parallel Line

**Parallel Lines:** Two lines in the same plane that never touch or intersect.

1. Lines A and B in the graph below are parallel.
  - a. What is the slope of line A?
  - b. What is the slope of line B?
  - c. What can be said about the slope of parallel lines?



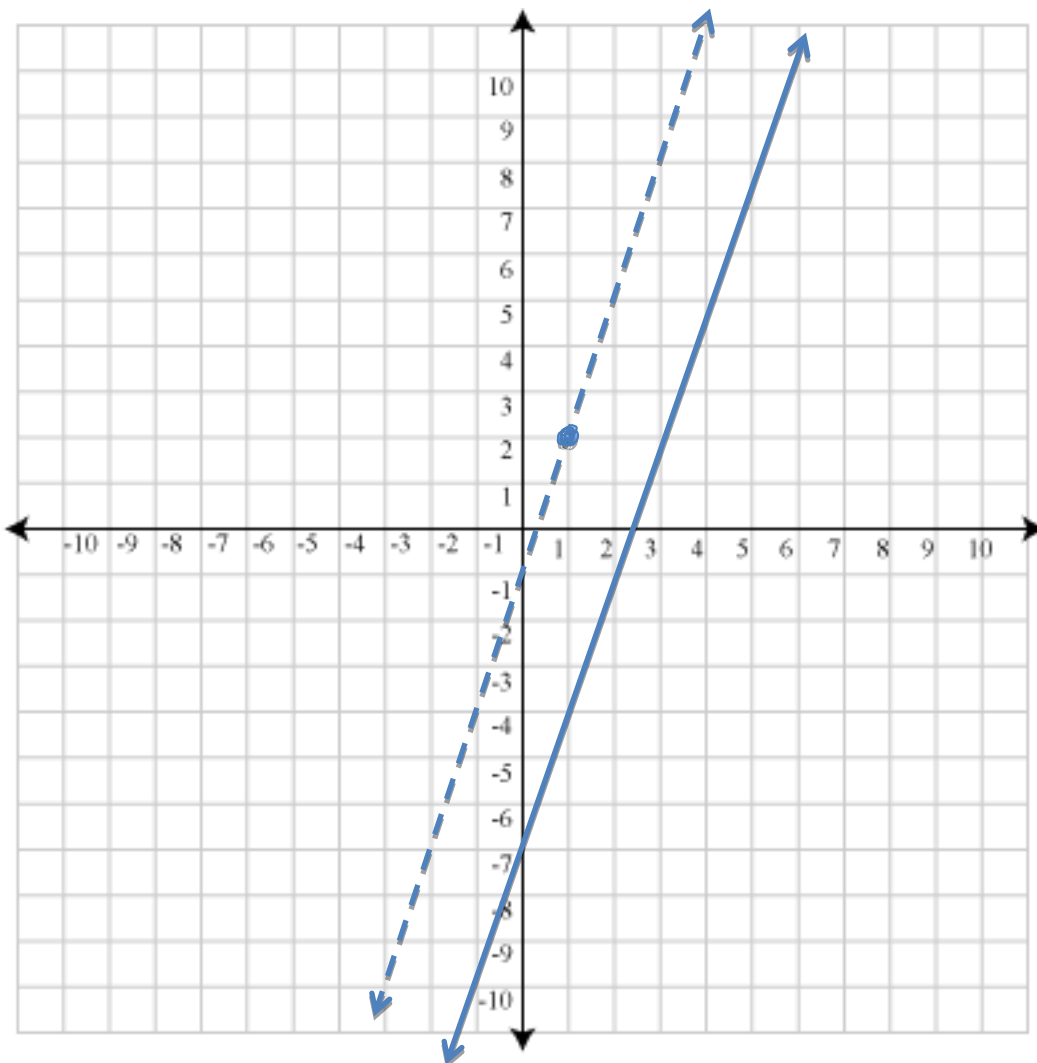
2. Line M and line N are parallel. The slope of line M is  $\frac{1}{7}$ . What is the slope of line N?

3. Find the equation of a line that passes through the point  $(1, 2)$  and is parallel to the line  $y=3x-7$ . You may refer to the diagram below if you need help visualizing!

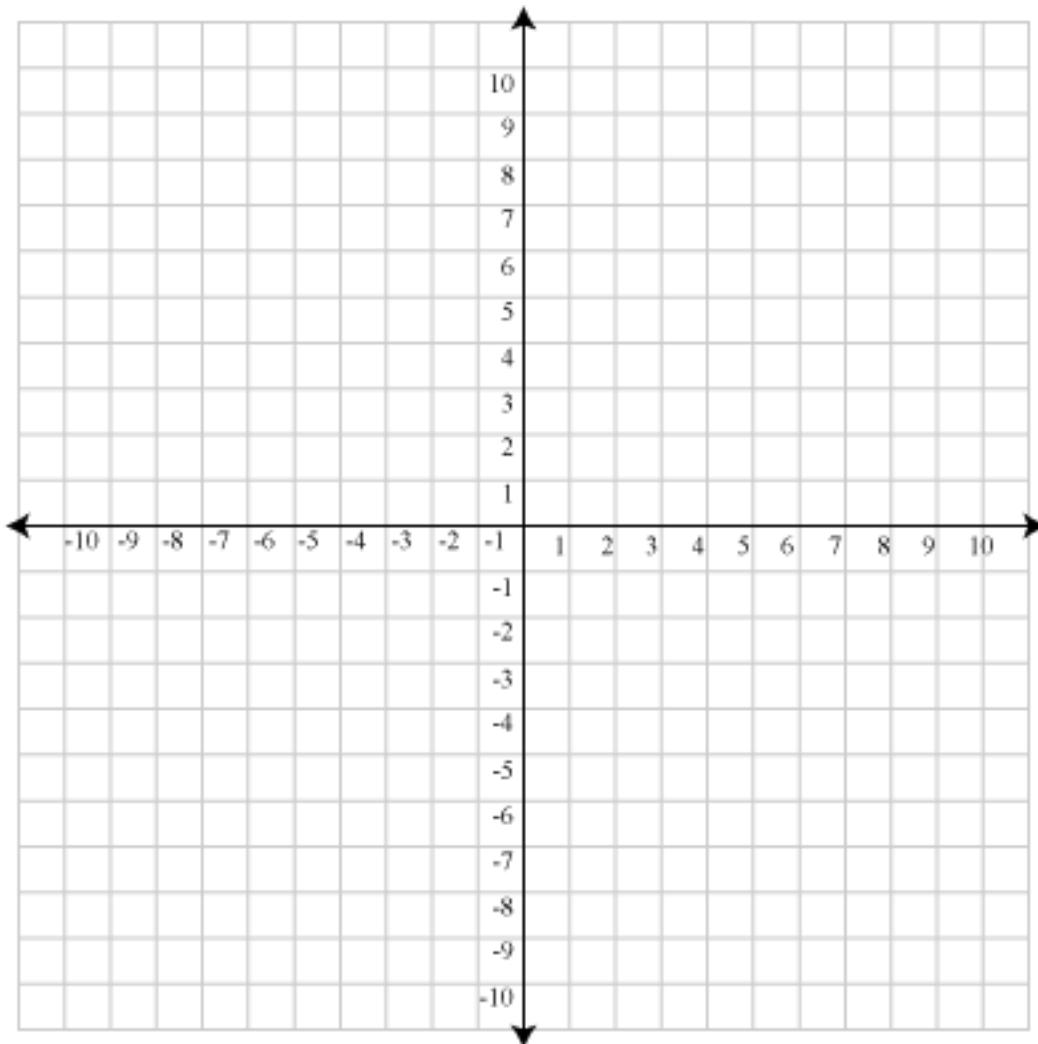
a. What is the slope of the line? (Hint: What do we know about slopes of parallel lines?)

b. Find the y-intercept of the line.

c. Write the equation of the line.



4. Find the equation of a line that passes through the point  $(2, -3)$  and is parallel to the line  $y = -4x + 1$ . (You may draw a picture below if you'd like to).
- What is the slope of the line?
  - Find the y-intercept of the line.
  - Write the equation of the line.



5. Find the equation of a line that passes through the point  $(-8, 2)$  and is parallel to the line  $y = \frac{1}{2}x - 12$ .

a. What is the slope of the line?

b. Find the y-intercept of the line.

c. Write the equation of the line.

6. Find the equation of a line that passes through the point  $(5, 1)$  and is parallel to the line  $y = -x + 1$ .

a. What is the slope of the line?

b. Find the y-intercept of the line.

c. Write the equation of the line.

7. Write the equation of the line that goes through the given point and runs parallel to the given line:

a. Through  $(1,-5)$ , parallel to  $y=-9x+2$

b. Through  $(-6,-3)$ , parallel to  $y=\frac{2}{3}x+4$

c. Through  $(4,2)$ , parallel to  $y=-x$

d. Through  $(0,0)$ , parallel to  $y=6x-2$

e. Through  $(3,-4)$ , parallel to  $y=-\frac{1}{3}x+7$

f. Through  $(2,-5)$ , parallel to  $y=x+4$

