

Name: _____ Date: _____

Slope and Intercept Form Worksheet

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Use the slope-intercept form $y = mx + b$ to solve the problems. (m = slope, b = y-intercept)

1. Identify the slope and y-intercept.

For each equation, write the slope (m) and y-intercept (b).

- a) $y = 3x + 5$ $m =$ _____ $b =$ _____
 b) $y = -2x + 7$ $m =$ _____ $b =$ _____
 c) $y = 4x - 6$ $m =$ _____ $b =$ _____
 d) $y = -x + 3$ $m =$ _____ $b =$ _____
 e) $y = 5x$ $m =$ _____ $b =$ _____

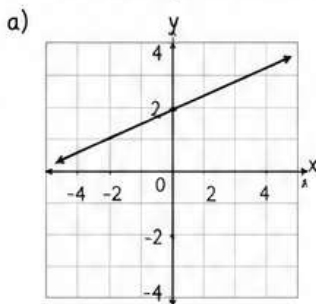
2. Write the equation in slope-intercept form.

Convert each equation to the form $y = mx + b$.

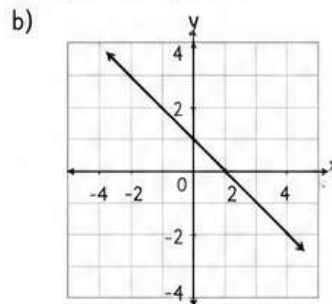
- a) $3x + y = 4$ _____
 b) $-2x + y = -6$ _____
 c) $4x - y = 8$ _____
 d) $-x + y = 5$ _____
 e) $5x + y = -10$ _____

3. Find the slope and y-intercept from the graph.

Write the equation of the line in slope-intercept form.



$y =$ _____



$y =$ _____

4. Write the slope and y-intercept.

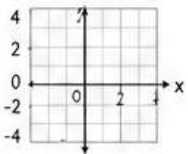
For each line, write the slope (m) and y-intercept (b).

- a) $y = -\frac{1}{2}x + 8$ $m =$ _____ $b =$ _____
 b) $y = \frac{2}{3}x - 4$ $m =$ _____ $b =$ _____
 c) $y = -5x + 12$ $m =$ _____ $b =$ _____
 d) $y = 7x - 9$ $m =$ _____ $b =$ _____
 e) $y = -\frac{3}{4}x + 6$ $m =$ _____ $b =$ _____

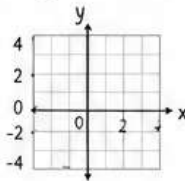
5. Graph the line.

Plot the line for each equation on the given grid.

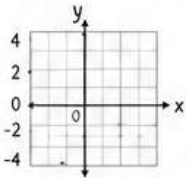
a) $y = x + 2$



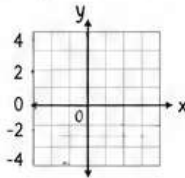
b) $y = -2x + 1$



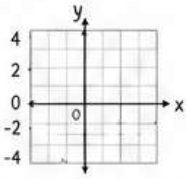
c) $y = 3x - 3$



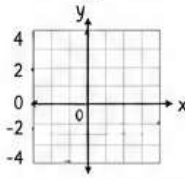
d) $y = -x + 4$



e) $y = \frac{1}{2}x - 3$



f) $y = \frac{1}{2}x - 1$



6. Find the slope.

For each pair of points, find the slope of the line.

- a) (1, 2) and (4, 8) $m =$ _____
 b) (2, 5) and (6, -3) $m =$ _____
 c) (-1, 7) and (3, 1) $m =$ _____
 d) (0, -4) and (5, 1) $m =$ _____
 e) (-2, 6) and (7, -3) $m =$ _____

7. Find the y-intercept.

For each equation, find the y-intercept.

- a) $y = 6x - 7$ $b =$ _____
 b) $y = -8x + 3$ $b =$ _____
 c) $y = 5x + 9$ $b =$ _____
 d) $y = -3x - 4$ $b =$ _____
 e) $y = 7x$ $b =$ _____

8. Write the equation of the line.

Use the given slope and y-intercept.

- a) $m = 4$, $b = -2$ $y =$ _____
 b) $m = -3$, $b = 5$ $y =$ _____
 c) $m = \frac{1}{2}$, $b = 0$ $y =$ _____
 d) $m = -6$, $b = 7$ $y =$ _____
 e) $m = 8$, $b = -9$ $y =$ _____

9. Which line has the greater slope?

Compare the slopes of the two lines.

- a) $y = 3x + 1$ and $y = 5x - 2$ _____
 b) $y = -4x + 3$ and $y = -2x - 1$ _____
 c) $y = \frac{1}{3}x + 5$ and $y = \frac{2}{3}x - 4$ _____

10. Word Problems

Write the equation of the line in slope-intercept form.

- | | | |
|---|---|--|
| a) The slope is 2 and the y-intercept is -3.
$y =$ _____ | b) The slope is -5 and the y-intercept is 6.
$y =$ _____ | c) The slope is 7 and the y-intercept is 0.
$y =$ _____ |
|---|---|--|