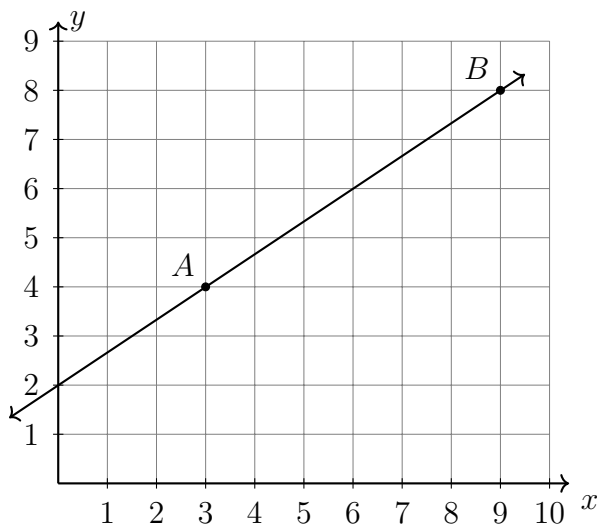


Name:

6.2 Classwork: Linear equations

The slope of a line: $m = \frac{y_2 - y_1}{x_2 - x_1}$

1. Find the slope of the line through the points $A(3, 4)$, $B(9, 8)$.



The slope-intercept equation of a line

$y = mx + b$, where m is the slope and b is the y -intercept

2. The line l has the equation $y = \frac{3}{2}x - 1$.

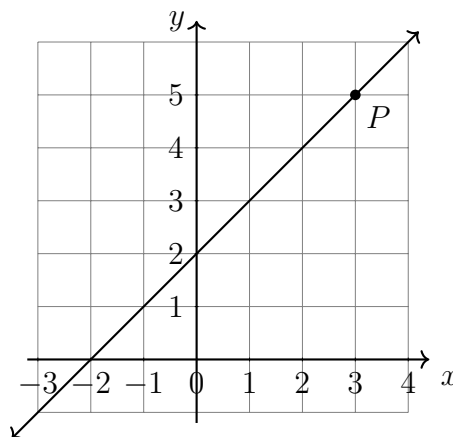
- (a) Write down its slope and y -intercept. $m =$ $b =$
- (b) Is the point $(4, 4)$ on the line l ? Justify your answer.

3. A line is shown on the grid below.

- (a) Write down its slope, y -intercept.
 $m =$ $b =$

- (b) Write down the equation of the line.

- (c) State the coordinates of the point P .



4. Draw a straight line through the points A and B shown on the grid below.

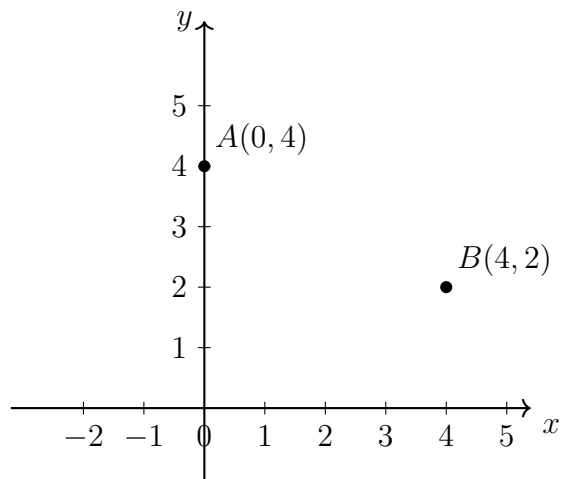
(a) Write down the line's y -intercept.

$b =$

(b) Write down the slope of the line.

$m =$

(c) Write down the equation of the line.



5. Find the slope of the line through the points $(-1, 3)$ and $(5, 0)$.

6. A linear equation is graphed below.

(a) State the coordinates of the point A .

(b) Write down the line's slope.

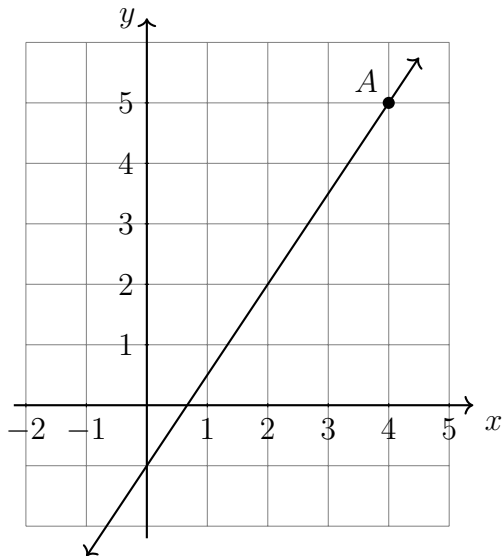
$m =$

(c) Write down its y -intercept.

$b =$

(d) Write down the equation of the line.

(e) Find the x -intercept.

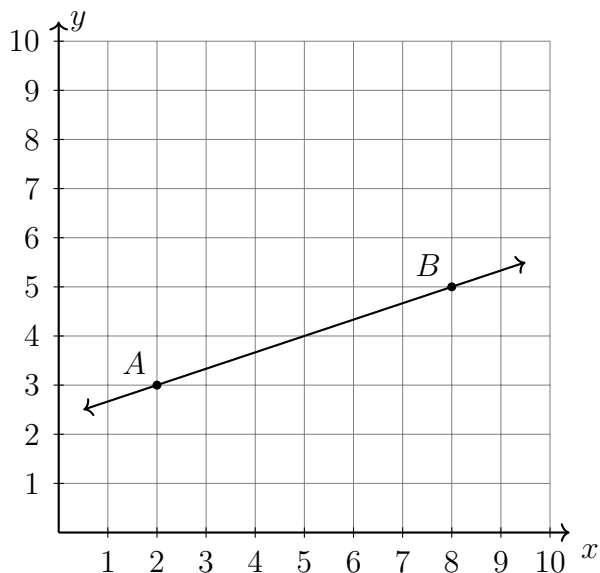


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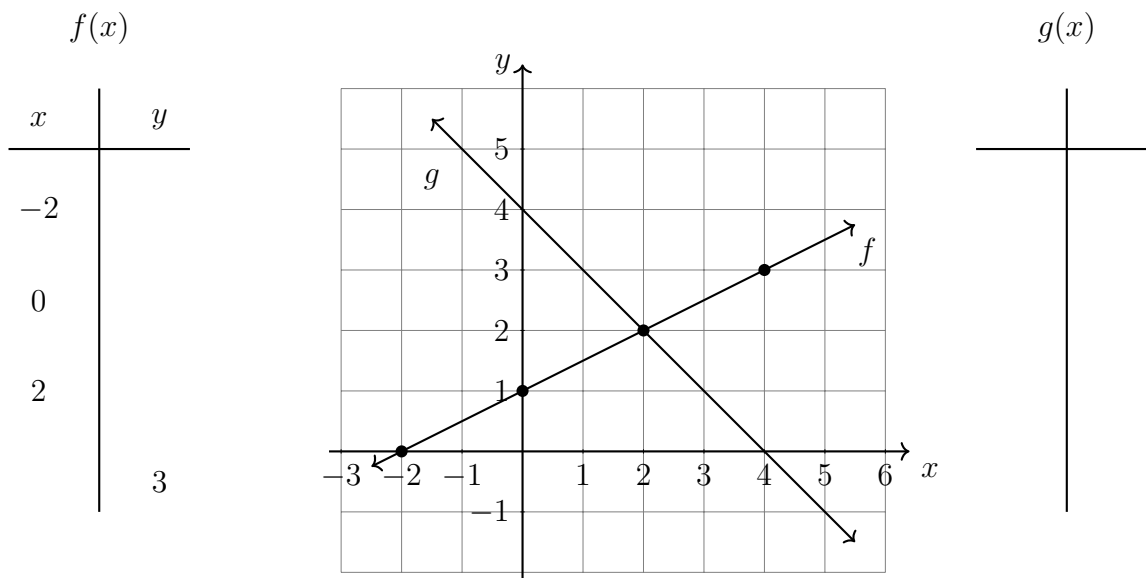
The slope of a line

“rise over run”: $m = \frac{y_2 - y_1}{x_2 - x_1}$

7. Find the slope of the line through the points $A(2, 3)$, $B(8, 5)$.



8. Two lines are graphed below.
- Complete the T-tables for each.
 - Write down the equations for each.



9. The line l is graphed at right.

4

(a) Write down the line's slope.

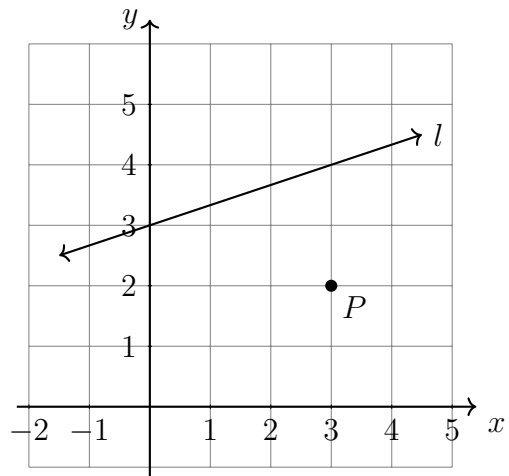
$m =$

(b) Write down its y -intercept.

$b =$

(c) Write down the equation of the line.

(d) Draw a line parallel to l through point P . (use a straight edge for full credit)



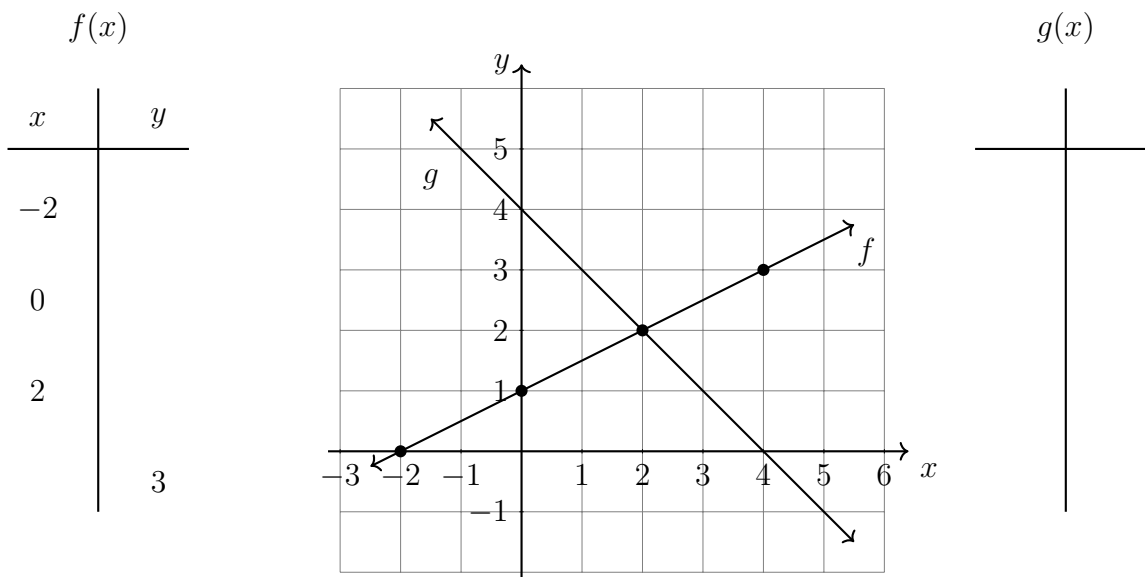
10. Write the linear equation $y - 5 = \frac{2}{3}(x - 3)$ in the form $y = mx + c$.

Name:

11. Two lines are graphed below.

(a) Complete the T-tables for each.

(b) Write down the equations for each.



12. The line l is graphed at right.

(a) Write down the line's slope.

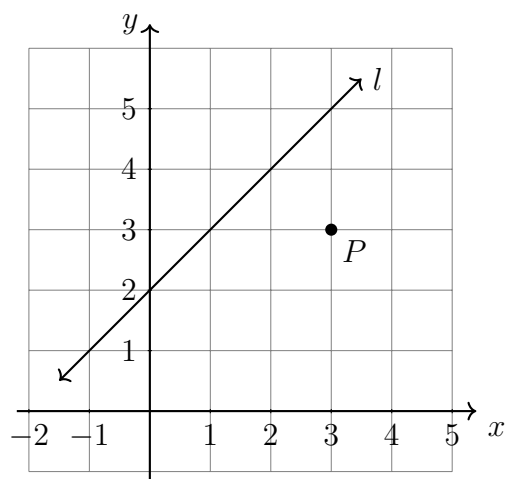
$m =$

(b) Write down its y -intercept.

$b =$

(c) Write down the equation of the line.

(d) Draw a line parallel to l through point P . (use a straight edge for full credit)



13. Find the slope of the line through the points $(3, -2)$ and $(-3, 2)$.

14. Write the linear equation $y - 5 = \frac{2}{5}(x - 10)$ in the form $y = mx + c$.

15. Is the point $(-4, 1)$ on the line $y = \frac{1}{2}x + 3$? Support your answer algebraically.

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16. Two lines are graphed below.

(a) Complete the T-tables for each.

(b) Write down the equations for each.

