

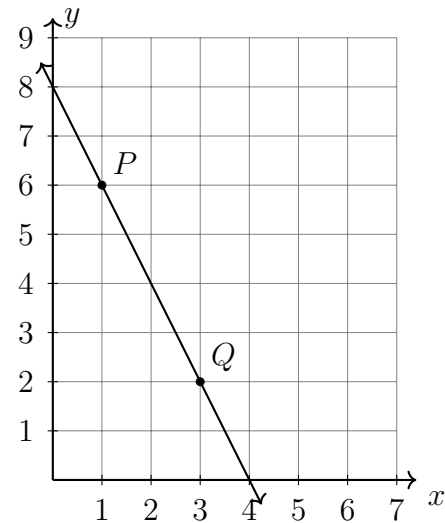
Name:

6.4 Classwork: Parallel and perpendicular slopes

HSG.GPE.B.5

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

1. Given \overleftrightarrow{PQ} , $P(1, 6)$, $Q(3, 2)$. Find its slope, y -intercept, and equation.



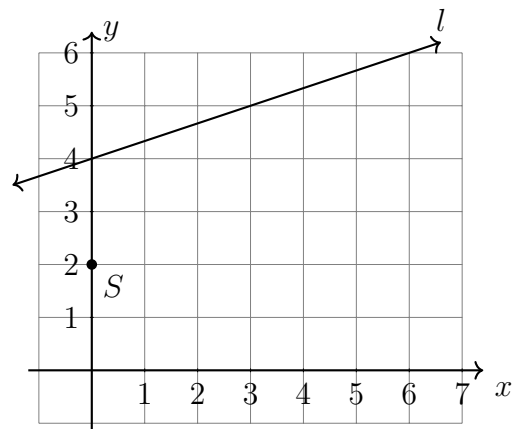
2. The line l is shown on the grid below.

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

(b) Write down the equation of line l .

(c) Draw a line parallel to line l through point S .

(d) Write down the equation of the second line.



3. The line has the equation $y = -x + 7$.

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

(b) Is the point $(4, 4)$ on the line? Justify your answer.

4. The line j has the equation $y = 3x + 2$.

(a) What is the slope of the line k , given $k \parallel j$?

(b) What is the slope of the line l , given $l \perp j$?

5. The line l is shown on the grid below.

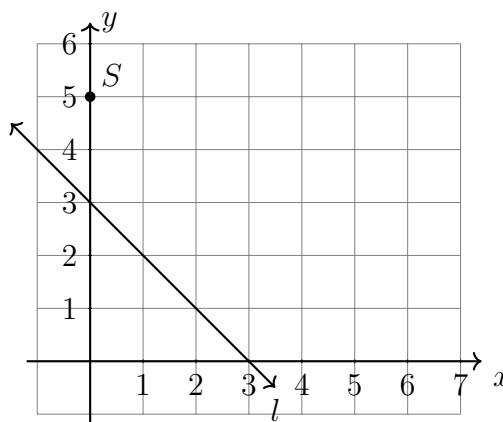
(a) Write down its slope, y -intercept.

$m =$ $b =$

(b) Write down the equation of line l .

(c) Draw a line parallel to line l through point S .

(d) Write down the equation of the second line.



6. The line l has the equation $y = -\frac{3}{5}x + 4$. To each line below, circle whether l is parallel, perpendicular, or neither.

(a) parallel perpendicular neither $y = \frac{3}{5}x - 2$

(b) parallel perpendicular neither $y = \frac{5}{3}x + 9$

(c) parallel perpendicular neither $3x - 5y = -15$

(d) parallel perpendicular neither $5x - 3y = 6$

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7. Graph and label the two equations. Mark their intersection as an ordered pair.

$$y = -4x - 6$$

$$x - 3y = -21$$

Are the lines parallel, perpendicular, or neither? Justify your answer.

