

# Writing the Equation of a Line Given Two Points

## Overview of problems



*Example Set: A*

Write the equation of a line that passes through the two points

$$(5, 1), (3, 9)$$

$$(-6, 2), (0, 8)$$

$$\left(\frac{1}{3}, \frac{2}{5}\right), \left(4, -\frac{1}{2}\right)$$

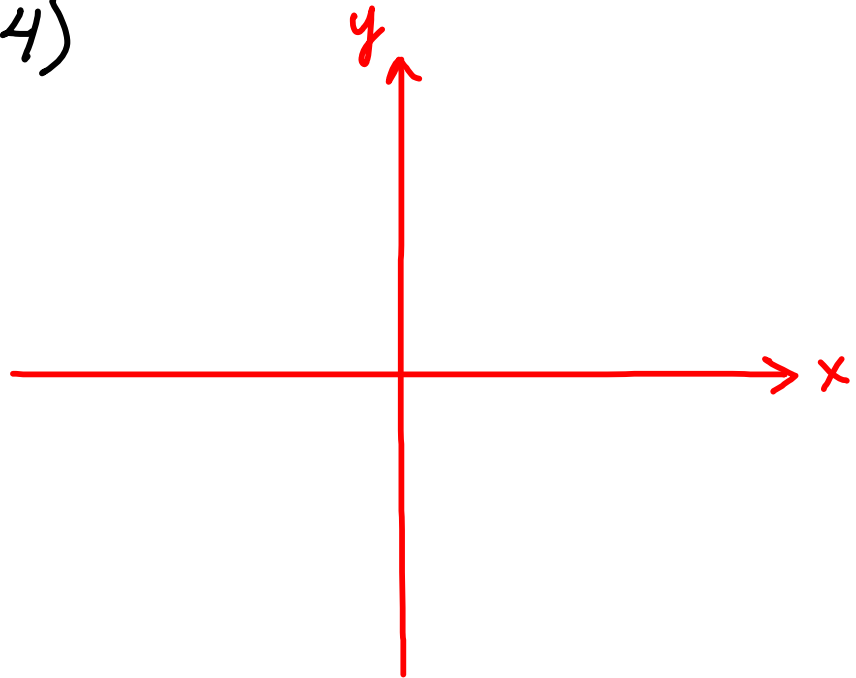


*Example Set: B*

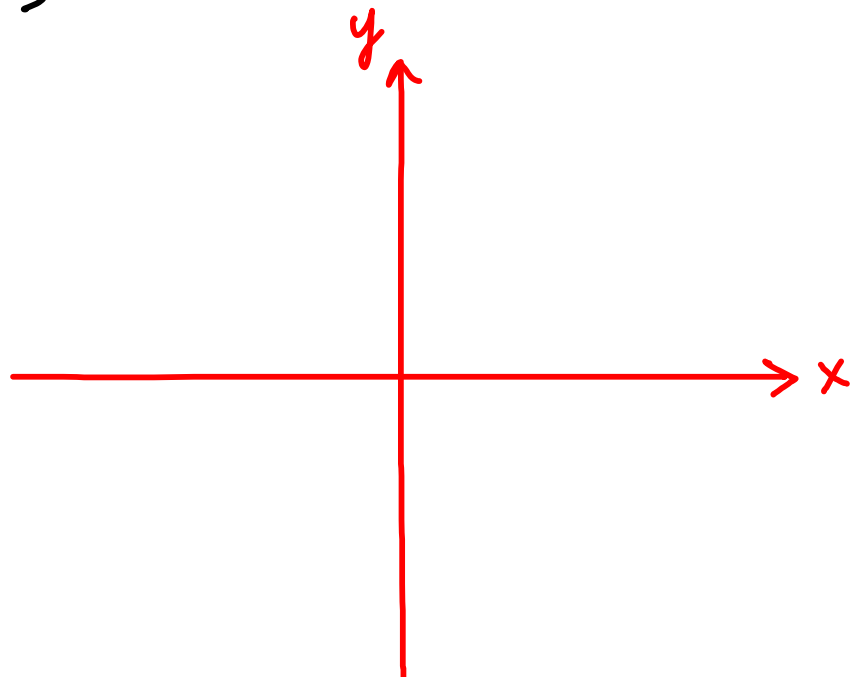
Write the equation of a line whose  $x$ -intercept is 8 and  $y$ -intercept is -4.

Sketch the graph of a line that passes through the two points. Use the information to write the line's equation

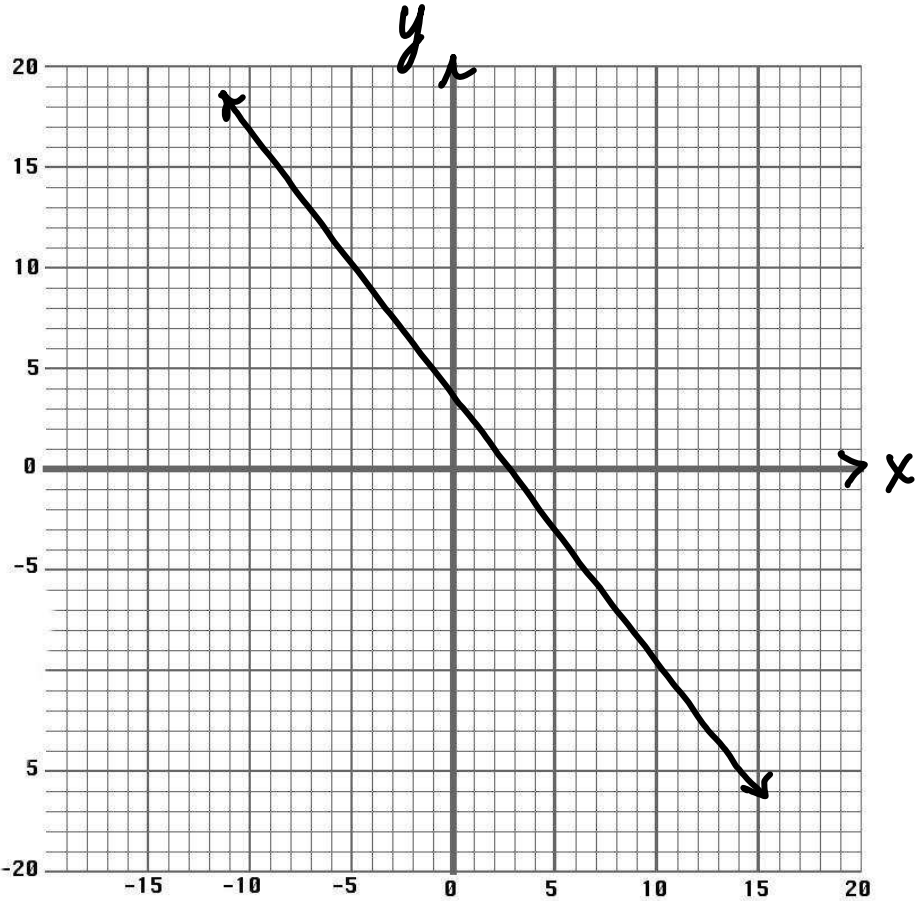
$$(0, -7), (1, 4)$$



$$(2, -2), (3, 8)$$



Use the graph to write the equation of the line



## Writing the Equation of a Line Given Two Points

### Overview of problems- KEY



Example Set: A

Write the equation of a line that passes through the two points

$$(5, 1), (3, 9)$$

$$y = -4x + 21$$

$$(-6, 2), (0, 8)$$

$$y = 1x + 8$$

$$\left(\frac{1}{3}, \frac{2}{5}\right), \left(4, -\frac{1}{2}\right)$$

$$y = \frac{-27}{110}x + \frac{53}{110}$$



Example Set: B

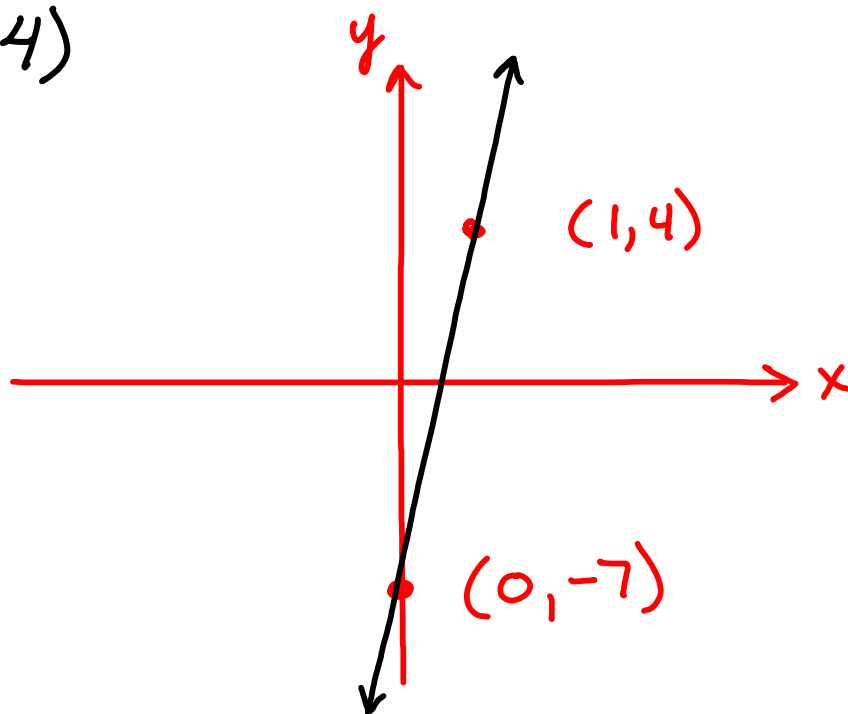
Write the equation of a line whose  $x$ -intercept is 8 and  $y$ -intercept is -4.

$$y = \frac{1}{2}x - 4$$

Sketch the graph of a line that passes through the two points. Use the information to write the line's equation

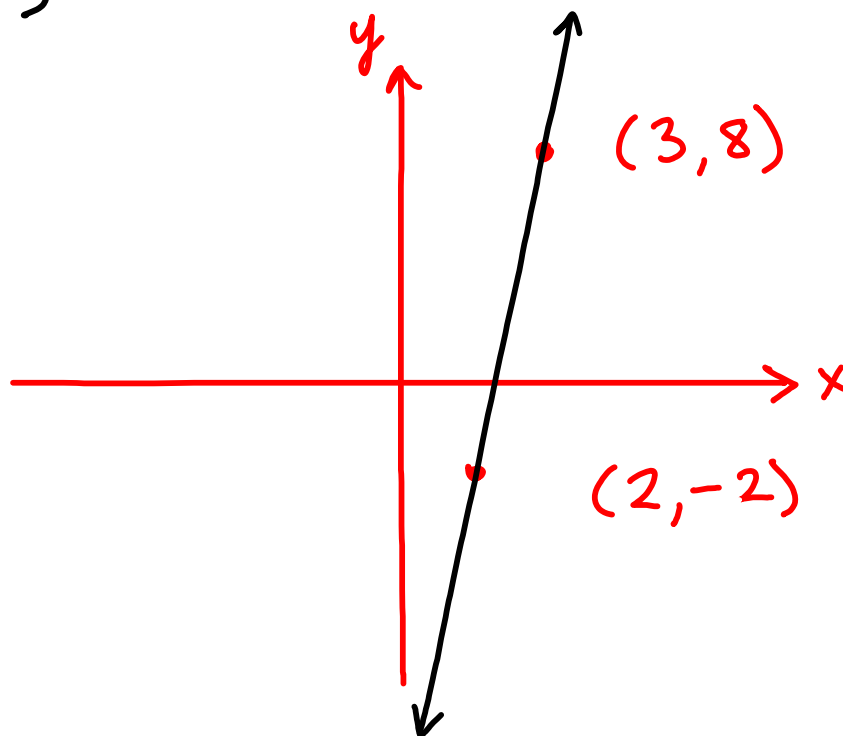
$(0, -7), (1, 4)$

$$y = 11x - 7$$



$(2, -2), (3, 8)$

$$y = 10x - 22$$



Use the graph to write the equation of the line

$$y = -\frac{13}{10}x + 3\frac{1}{2}$$

