

Write in standard form an equation of a line with slope $-\frac{1}{2}$ through the point $(8, -1)$

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$$Ax + By = C$$

$$y - (-1) = -\frac{1}{2}(x - 8)$$

$$y + 1 = -\frac{1}{2}(x - 8) \text{ point slope form}$$

$$y+1 = -\frac{1}{2}(x-8)$$

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

-1 + $\frac{1}{2}x$ -1

$$Ax + By = C$$

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

$x + 2y = 6$ standard form

Write in slope intercept form an equation of a line with slope $-\frac{1}{2}$ through the point $(8, -1)$

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

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

slope intercept form

② Write in point slope form
the equation of a line
through $(1, 5)$ and $(4, -1)$

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 $x_1 \ y_1$ $x_2 \ y_2$

$$y - 5 = m(x - 1)$$
$$y - 5 = -2(x - 1) \text{ point slope}$$

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-1 - 5}{4 - 1} = \frac{-6}{3} = -2$$

Convert to

① slope intercept form:

② Standard form:

convert to $y-5 = -2(x-1)$

Ⓐ slope intercept form:

$$\begin{array}{r} y-5 = -2x+2 \\ +5 \qquad \qquad \qquad +5 \\ \hline \end{array}$$

$$y = -2x+7$$

Ⓑ Standard form:

$$2x+y=7$$

Find the slope of
 $4x + 3y = 7$

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$$\frac{3y}{3} = \frac{-4x}{3} + \frac{7}{3}$$

$$y = -\frac{4}{3}x + \frac{7}{3}$$

slope intercept form

Write in standard form:

$$y = 4x + 3$$

Write in standard form:

$$y = 4x + 3$$

$$-4x \quad -4x$$

$$-4x + y = 3$$

$$4x - y = -3$$