

Write an equation for the line in point/slope form and slope/intercept form that has the given condition.

4. Slope= $\frac{3}{2}$ and passes through the origin

5. X-intercept=4 and Y-intercept=-3

Solution.

4. An equation for the line in point/slope form is

$$y - y_0 = k(x - x_0).$$

In our case we have: $k = \frac{3}{2}$, $x_0 = 0$, $y_0 = 0$. Then

$$y - 0 = \frac{3}{2}(x - 0),$$

$$3x - 2y = 0.$$

5. An equation for the line in slope/intercept form is

$$\frac{x}{a} + \frac{y}{b} = 1.$$

In our case we have: $a = 4$, $b = -3$. Then

$$\frac{x}{4} - \frac{y}{3} = 1,$$

$$3x - 4y = 12,$$

$$3x - 4y - 12 = 0.$$

Answer:

4. $3x - 2y = 0.$

5. $3x - 4y - 12 = 0.$