

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. The slope of the line is  $m = \frac{3}{2}$

In the point/slope form we have  $y - y_1 = m(x - x_1)$

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

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

In the slope/intercept form  $y = \frac{3}{2}x + b$

If it passes through (0,0) then  $0 = \frac{3}{2} * 0 + b \quad \Rightarrow \quad b = 0$

So in the slope/intercept form we have:  $y = \frac{3}{2}x$

**Answer:**  $y = \frac{3}{2}x$   $y = \frac{3}{2}x$

5. The slope of the line is  $m = \frac{3}{4}$

In the point/slope form we have  $y - y_1 = m(x - x_1)$

$$y - (-3) = \frac{3}{4}(x + 0)$$

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

In the slope/intercept form  $y = \frac{3}{4}x + b$

If it passes through (0, -3) then  $-3 = \frac{3}{4} * 0 + b \quad \Rightarrow \quad b = -3$

So in the slope/intercept form we have:  $y = \frac{3}{4}x - 3$

**Answer:**  $y + 3 = \frac{3}{4}x$   $y = \frac{3}{4}x - 3$