KNEWTON | alta

Find Linear Equations

Learning Objectives

- Find equation of a line, in slope-intercept form, given slope and one point
- Find equation, in slope-intercept form, of a line passing through two given points
- Given slope and intercept, find the equation of a line and write it in standard form

Find equation of a line, in slope-intercept form, given slope and one point

1. Given $m = -\frac{1}{3}$ and the line passes through the point $P(3,1)$, find the equation of the line in slope-intercept form.

Find equation, in slope-intercept form, of a line passing through two given points.

2. Find an equation in slope-intercept form that passes through the points $(-2,5)$ and $(1,2)$.

Given slope and intercept, find the equation of a line and write it in standard form

3. A line has an intercept of $y = 4$, and has a slope of $m = -\frac{1}{2}$. Find the equation of the line in standard form.

Forms of Equations of Lines:
- Slope-Intercept Form: $y = mx + b$
- Point-Slope Form: $y - y_1 = m(x - x_1)$
- Standard Form: $Ax + By = C$
- Horizontal Line: $y = b$
- Vertical Line: $x = a$

ANSWER KEY

1. $y = -\frac{1}{3}x + 2$
2. $y = -x + 3$
3. $x + 2y = 8$