

Writing Linear Equations

Write an equation of a line in Point-Slope Form

Then convert the equation to Slope-Intercept Form

① $m = 3$; passes th. $(5, -2)$ ② $m = -\frac{5}{3}$; pass. th. $(-3, -5)$

③ $m = \frac{1}{4}$; pass. th. $(0, 8)$ ④ pass. th. $(-1, 7)$ & $(8, -2)$

⑤ pass. th. $(6, 0)$ & $(0, 4)$

Write an equation of a line in Point-Slope Form,
Slope-Intercept Form & Standard Form.

⑥ $m = 3$; pass. th. $(1, 2)$ ⑦ $m = \frac{1}{2}$; pass. th. $(6, 4)$

⑧ pass. th. $(-2, 0)$ & $(0, -4)$

Answers:

① $y + 2 = 3(x - 5)$ ② $y + 5 = -\frac{5}{3}(x + 3)$ ③ $y - 8 = \frac{1}{4}x$
 $y = 3x - 17$ $y = -\frac{5}{3}x - 10$ $y = \frac{1}{4}x + 8$

④ $y - 7 = -1(x + 1)$ OR $y + 2 = -1(x - 8)$ ⑤ $y = -\frac{2}{3}(x - 6)$ OR $y - 4 = -\frac{2}{3}x$
 $y = -x + 6$ $y = -\frac{2}{3}x + 4$

⑥ $y - 2 = 3(x - 1)$ ⑦ $y - 4 = \frac{1}{2}(x - 6)$ ⑧ $y + 4 = -2x$ OR
 $y = 3x - 1$ $y = \frac{1}{2}x + 1$ $y = -2(x + 2)$
 $3x - y = 1$ $x - 2y = -2$ $y = -2x - 4$
 $2x + y = -4$