

Module 6 Lesson 2

TT 1. *Foundations and Pre-calculus Mathematics 10* (Pearson), question 5 on page 372

Possible Solutions

Note: The student was directed to write the equation in slope-point form and then to convert to slope-intercept form and general form.

5. a) $y - y_1 = m(x - x_1)$
 $y - 2 = -5[x - (-4)]$
 $y - 2 = -5(x + 4)$ This is the slope-point form.
 $y - 2 = -5x - 20$
 $y = -5x - 18$ This is the slope-intercept form.
 $5x + y + 18 = 0$ This is the general form.

b) $y - y_1 = m(x - x_1)$
 $y - (-8) = 7(x - 6)$
 $y + 8 = 7(x - 6)$ This is the slope-point form.
 $y + 8 = 7x - 42$
 $y = 7x - 50$ This is the slope-intercept form.
 $7x - y - 50 = 0$ This is the general form.

c) $y - y_1 = m(x - x_1)$
 $y - (-5) = -\frac{3}{4}(x - 7)$
 $y + 5 = -\frac{3}{4}(x - 7)$ This is the slope-point form.
 $y + 5 = -\frac{3}{4}x + \frac{21}{4}$
 $y + 5 - 5 = -\frac{3}{4}x + \frac{21}{4} - 5$
 $y = -\frac{3}{4}x + \frac{1}{4}$ This is the slope-intercept form.
 $4y = 4\left(-\frac{3}{4}x + \frac{1}{4}\right)$
 $4y = -3x + 1$
 $3x + 4y - 1 = 0$ This is the general form.

d) $y - y_1 = m(x - x_1)$
 $y - (-8) = 0(x - 3)$
 $y + 8 = 0(x - 3)$ This is the slope-point form.
 $y + 8 = 0$ This is the general form.
 $y = -8$ This is the slope-intercept form.