Typeset by Jonathan Rufo Bacolod using LaTeX

Activity 1.6.3: Finding the Equation of a Line Given the Slope and the Intercepts

Total points = 42

A. Answers

1. $m = -2, b = 3$
   $y = mx + b$ ✓
   $y = -2x + 3$ ✓
   $2x + y = -2x + 2x + 3$ ✓
   $2x + y = 3$ ✓
2. $m = \frac{2}{3}, b = -3$
   $y = mx + b$ ✓
   $y = \frac{2}{3}x - 3$ ✓
   $-\frac{2}{3}x + y = \frac{2}{3}x - \frac{2}{3}x - 3$ ✓
   $-3\left[-\frac{2}{3}x + y = -3\right]$ ✓
   $2x - 3y = 9$ ✓
3. $m = -5, b = -1$
   $y = mx + b$ ✓
   $y = -5x - 1$ ✓
   $5x + y = -5x + 5x - 1$ ✓
   $5x + y = -1$ ✓
4. $m = -3, b = \frac{3}{2}$
   $y = mx + b$ ✓
   $y = -3x + \frac{3}{2}$ ✓
   $3x + y = -3x + 3x + \frac{3}{2}$ ✓
   $2\left[3x + y = \frac{3}{2}\right]$ ✓
   $6x + 2y = 3$ ✓
5. $m = \frac{6}{5}, b = \frac{4}{3}$
   $y = mx + b$ ✓
   $y = -2x + 3$ ✓
   $2x + y = -2x + 2x + 3$ ✓
   $2x + y = 3$ ✓

B. Answers

1. $a = 1; b = 5$
   $\frac{x}{a} + \frac{y}{b} = 1$ ✓
   $\frac{x}{1} + \frac{y}{5} = 1$ ✓
   $5\left[x + \frac{y}{5} = 1\right]$ ✓
   $5x + y = 5$ ✓
2. $a = 3; b = -4$
   $\frac{x}{a} + \frac{y}{b} = 1$ ✓
   $\frac{x}{3} + \frac{y}{-4} = 1$ ✓
   $12\left[\frac{x}{3} + \frac{y}{-4} = 1\right]$ ✓
   $4x - 3y = 12$ ✓
3. $(3, 0); (0, 3)$
   $\frac{x}{a} + \frac{y}{b} = 1$ ✓
   $\frac{x}{3} + \frac{y}{3} = 1$ ✓
   $3\left[\frac{x}{3} + \frac{y}{3} = 1\right]$ ✓
   $x + y = 3$ ✓
4. $(-5, 0); (0, -4)$
   $\frac{x}{a} + \frac{y}{b} = 1$ ✓
   $\frac{x}{-5} + \frac{y}{-4} = 1$ ✓
   $-20\left[\frac{x}{-5} + \frac{y}{-4} = 1\right]$ ✓
   $4x + 5y = -20$ ✓
5. $(-6, 0); (0, 2)$
   $\frac{x}{a} + \frac{y}{b} = 1$ ✓
   $\frac{x}{-6} + \frac{y}{2} = 1$ ✓
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B. Answers

1. $a = 1; b = 5$
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