Typeset by Jonathan Rufo Bacolod using LaTeX

Activity 1.7.3: Systems of Linear Equations in Two Variables

Total points = 60

Answers

1. $8x + 2y = 7$ ✓
$8x - 8x + 2y = -8x + 7$ ✓
$\frac{2y}{2} = \frac{-8x}{2} + \frac{7}{2}$ ✓
$y = -4x + \frac{7}{2}$ ✓
$m = -4$✓, $b = \frac{7}{2}$ ✓
$y = -4x + 1$ ✓
$m = -4$✓, $b = 1$ ✓
∴ Inconsistent and Independent ✓
2. $x - 2y = 9$ ✓
$x - x - 2y = -x + 9$ ✓
$\frac{-2y}{-2} = \frac{-x}{-2} + \frac{9}{-2}$ ✓
$y = \frac{1}{2}x - \frac{9}{2}$ ✓
$m = \frac{1}{2}$✓, $b = -\frac{9}{2}$ ✓
$x + 3y = 14$ ✓
$x - x + 3y = -x + 14$ ✓
$\frac{3y}{3} = \frac{-x}{3} + \frac{14}{3}$ ✓
$y = -\frac{1}{3}x + \frac{14}{3}$ ✓
$m = -\frac{1}{3}$✓, $b = \frac{14}{3}$ ✓
∴ Consistent and Independent ✓
3. $x + 3y = 8$ ✓
$x - x + 3y = -x + 8$ ✓
$\frac{3y}{3} = \frac{-x}{3} + \frac{8}{3}$ ✓
$y = -\frac{1}{3}x + \frac{8}{3}$ ✓
$m = -\frac{1}{3}$✓, $b = \frac{8}{3}$ ✓
$x - 3y = 8$ ✓
$x - x - 3y = -x + 8$ ✓
$\frac{-3y}{-3} = \frac{-x}{-3} + \frac{8}{-3}$ ✓
$y = \frac{1}{3}x - \frac{8}{3}$ ✓
$m = \frac{1}{3}$✓, $b = -\frac{8}{3}$ ✓
∴ Consistent and Independent ✓
4. $2y = 6x - 5$ ✓
$\frac{2y}{2} = \frac{6x}{2} - \frac{5}{2}$ ✓
$y = 3x - \frac{5}{2}$ ✓
$m = 3$✓, $b = -\frac{5}{2}$ ✓
$3y = 9x + 1$✓
$\frac{3y}{3} = \frac{9x}{3} + \frac{1}{3}$ ✓
$y = 3x + \frac{1}{3}$ ✓
$m = 3$✓, $b = \frac{1}{3}$ ✓
∴ Inconsistent and Independent ✓
5. $3x + 5y = 15$✓
$3x - 3x + 5y = -3x + 15$✓
$\frac{5y}{5} = \frac{-3x}{5} + \frac{15}{5}$ ✓
$y = -\frac{3}{5}x + 3$ ✓
$m = -\frac{3}{5}$✓, $b = 3$ ✓
$4x - 7y = 10$✓
$4x - 4x - 7y = -4x + 10$✓
$\frac{-7y}{-7} = \frac{-4x}{-7} + \frac{10}{-7}$ ✓
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