Typeset by Jonathan Rufo Bacolod using LaTeX

Activity 1.7.1: Solving Problems Involving Linear Equations

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. $3x + 5y = 15$✓
   $3x - 3x + 5y = -3x + 15$✓
   $\frac{5y}{5} = \frac{-3x}{5} + \frac{15}{5}$ ✓
   $y = -\frac{3}{5}x + 3$ ✓
   $m = -\frac{3}{5}$✓, $b = 3$ ✓

   $4x - 7y = 10$✓
   $4x - 4x - 7y = -4x + 10$✓
   $\frac{-7y}{-7} = \frac{-4x}{-7} + \frac{10}{-7}$ ✓
   $y = \frac{4}{7}x - \frac{10}{7}$ ✓
   $m = \frac{4}{7}$✓, $b = -\frac{10}{7}$ ✓

   ∴ Consistent and Independent ✓

Typeset by Jonathan Rufo Bacolod using LaTeX

Activity 1.7.1: Solving Problems Involving Linear Equations

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. $3x + 5y = 15$✓
   $3x - 3x + 5y = -3x + 15$✓
   $\frac{5y}{5} = \frac{-3x}{5} + \frac{15}{5}$ ✓
   $y = -\frac{3}{5}x + 3$ ✓
   $m = -\frac{3}{5}$✓, $b = 3$ ✓

   $4x - 7y = 10$✓
   $4x - 4x - 7y = -4x + 10$✓
   $\frac{-7y}{-7} = \frac{-4x}{-7} + \frac{10}{-7}$ ✓
   $y = \frac{4}{7}x - \frac{10}{7}$ ✓
   $m = \frac{4}{7}$✓, $b = -\frac{10}{7}$ ✓

   ∴ Consistent and Independent ✓

Typeset by Jonathan Rufo Bacolod using LaTeX

Activity 1.7.1: Solving Problems Involving Linear Equations

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. $3x + 5y = 15$✓
   $3x - 3x + 5y = -3x + 15$✓
   $\frac{5y}{5} = \frac{-3x}{5} + \frac{15}{5}$ ✓
   $y = -\frac{3}{5}x + 3$ ✓
   $m = -\frac{3}{5}$✓, $b = 3$ ✓

   $4x - 7y = 10$✓
   $4x - 4x - 7y = -4x + 10$✓
   $\frac{-7y}{-7} = \frac{-4x}{-7} + \frac{10}{-7}$ ✓
   $y = \frac{4}{7}x - \frac{10}{7}$ ✓
   $m = \frac{4}{7}$✓, $b = -\frac{10}{7}$ ✓

   ∴ Consistent and Independent ✓

Typeset by Jonathan Rufo Bacolod using LaTeX

Activity 1.7.1: Solving Problems Involving Linear Equations

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. $3x + 5y = 15$✓
   $3x - 3x + 5y = -3x + 15$✓
   $\frac{5y}{5} = \frac{-3x}{5} + \frac{15}{5}$ ✓
   $y = -\frac{3}{5}x + 3$ ✓
   $m = -\frac{3}{5}$✓, $b = 3$ ✓

   $4x - 7y = 10$✓
   $4x - 4x - 7y = -4x + 10$✓
   $\frac{-7y}{-7} = \frac{-4x}{-7} + \frac{10}{-7}$ ✓
   $y = \frac{4}{7}x - \frac{10}{7}$ ✓
   $m = \frac{4}{7}$✓, $b = -\frac{10}{7}$ ✓

   ∴ Consistent and Independent ✓