Solving Two-Step Equations 1.7

Overview of problems

Example Set: A

Solve the equations- show all work:

1. $2x + 6 = 18$
2. $10y - 50 = -150$
3. $3x - 7 = 23$
4. $-3z + 5 = 26$
5. $-w + 9 = -31$
6. $\frac{1}{4}x + 2 = 3$

Example Set: B

Solve the equations- show all work:

1. $\frac{1}{3}x + 6 = 10$
2. $-4 + \frac{4}{5}x = -6$
3. $\frac{3}{8}w - \frac{1}{4} = \frac{1}{16}$
4. $\frac{t}{6} + \frac{1}{3} = \frac{1}{2}$
5. $6 = 14 - 2x$
6. $-\frac{2}{5}t + 1 = -2$
7. $7 + \frac{m}{11} = -3$
8. $3p - (-4) = 17$

Solving Two-Step Equations 1.7

Overview of problems

Example Set: C

Solve the equations- show all work:

1. $5.9x + 2.6 = 14.7$
2. $-1.3y - 108.4 = .015$
3. $.00715 + .3z = -401$
4. $8.9g - .25 = \frac{1}{8}$

Example Set: D

1. The formula below models the population growth for a small town where P is the population and Y is the years of growth. Approximately how many days will it take the town to reach a population of 17,500?

   P = 600Y + 14000

Solving Two-Step Equations 1.7

Overview of problems

*Example Set: A -**ANSWER KEY***

Solve the equations- show all work:

1. $2x + 6 = 18$ $x = 6$
2. $10y - 50 = -150$ $y = -10$
3. $3x - 7 = 23$ $x = 10$
4. $-3z + 5 = 26$ $z = -7$
5. $-w + 9 = -31$ $w = 40$
6. $\frac{1}{4}x + 2 = 3$ $x = 4$

*Example Set: B- **ANSWER KEY***

Solve the equations- show all work:

1. $\frac{1}{3}x + 6 = 10$ $x = 12$
2. $-4 + \frac{4}{5}x = -6$ $x = -\frac{5}{2}$
3. $\frac{3}{8}w - \frac{1}{4} = \frac{1}{16}$ $w = \frac{5}{6}$
4. $\frac{t}{6} + \frac{1}{3} = \frac{1}{2}$ $t = 1$
5. $6 = 14 - 2x$ $x = 4$
6. $-\frac{2}{5}t + 1 = -2$ $t = \frac{15}{2}$
7. $7 + \frac{m}{11} = -3$ $m = -110$
8. $3p - (-4) = 17$ $p = \frac{13}{3}$

Solving Two-Step Equations 1.7

Overview of problems

*Example Set: C-**ANSWER KEY***

Solve the equations- show all work:

1. $5.9x + 2.6 = 14.7$ $x = 2.050$
2. $-1.3y - 108.4 = .015$ $y = -83.396$
3. $.00715 + .3z = -401$ $z = -1336.6905$
4. $8.9g - .25 = \frac{1}{8}$ $g = .04213$

*Example Set: D-**ANSWER KEY***

1. The formula below models the population growth for a small town where P is the population and Y is the years of growth. Approximately how many days will it take the town to reach a population of 17,500?

P = 600Y + 14000

2127.95 days