13.5

Solving Two-Step Equations

One-Step Equation Review

1) $m + 9 = 3$

2) $m - 3 = -5$

3) $-3a = -18$

4) $\frac{x}{-5} = -2$

Two-Step Equation Procedures

It takes two steps to solve an equation that has more than one operation.

Use PEMDAS backwards

1. **Cancel by using the addition or subtraction property of equality. (use the inverse of addition or subtraction)**

2. **Cancel further by using the multiplication or division property of equality. (use the inverse of multiplication or division)**

Solving Two-Step Equations

a) $2x - 15 = 5$

1. **Cancel addition or subtraction**
2. **Cancel multiplication or division**

Solving Two-Step Equations

b) $11n + 1 = 67$

1. Cancel addition or subtraction
2. Cancel multiplication or division

Solving Two-Step Equations

c) $-2y + 4 = 8$

1. Cancel addition or subtraction
2. Cancel multiplication or division

Solving Two-Step Equations

d) $5x - 2 = 3$

1. Cancel addition or subtraction
2. Cancel multiplication or division

Solving Two-Step Equations

e) $\frac{x}{5} - 9 = -2$

1. Cancel addition or subtraction
2. Cancel multiplication or division

Solving Two-Step Equation Word Problems

f) Bobby bought 3 T-shirts at the mall and a pair of pants for $16 at the clothing store. All together he spent $28 for the clothes. How much was each shirt?

Solving Two-Step Equation Word Problems

g) Diane sold 9 decorated flowers that cost the same amount each plus a dozen roses for $28. All together she sold $73 in flowers. How much was each decorated flower?

Summary

Remember, use inverse operations to solve equations.

Work in reverse order of operations.

Solving Two-Step Equation Word Revisited

h) $5(x-4)=15$

Solving Two-Step Equation Word Revisited

i) $-4(m+3)=24$

Solving Two-Step Equation Word Revisited

j) $\frac{x}{8}-\frac{1}{2}=-\frac{7}{2}$

Solving Two-Step Equation Word Revisited

k) $\frac{2}{5}+4a=-\frac{6}{5}$

Combining Like Terms Before Solving

l) $3y-8y=25$

Combining Like Terms Before Solving

m) $7x - 10x = -27$