Unit 1

Solving Multi-Step Equations Review

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

$$b)\ -2y+4=8$$

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

Solving Two-Step Equations

$c)\ 5x - 2 = 3$

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

Solving Two-Step Equations

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

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

Solving Two-Step Equation Word Problems

e) 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

f) 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?

Practice

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

2) $-7t + 3 = -25$

Solving Two-Step Equation Word Revisited

$g)\ 5(x-4)=15$

Solving Two-Step Equation Word Revisited

$$\boldsymbol{h)}\ -4(\boldsymbol{m}+3)=24$$

Solving Two-Step Equation Word Revisited

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

Solving Two-Step Equation Word Revisited

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

Combining Like Terms Before Solving

$k)\quad 3y-8y=25$

Combining Like Terms Before Solving

$l)\quad 7x - 10x = -27$

Practice

3) $-0.07 = \frac{k}{8} + 0.1$

4) $\frac{1}{4}y + 5 = 3$

Solving Multi-Step Equations

- Distribute if possible
- Simplify
- Solve

Examples

$a)\quad 9a - a - 7 = 13$

Solving Multi-Step Equations

- **Distribute if possible**
- **Simplify**
- **Solve**

Examples

$b)\quad 35 = -5 + 2x - 7x$

Solving Multi-Step Equations

- Distribute if possible
- Simplify
- Solve

Examples

$c)\ \ 4z+7(z-2)=41$

Solving Multi-Step Equations

- **Distribute if possible**
- **Simplify**
- **Solve**

Examples

$$d)\ -3(k+1)+4(k-2)=15$$