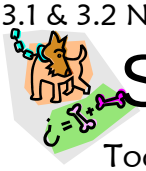
3.1 & 3.2 Notes Name: Me



Solving One and Two Step Equations

Today's Target: To use inverse operations to Solve for "x" (get x by itself)

Inverse Operations:

- ★ Addition and Subtraction
- ★ Multiplication and Division

Directions: Solve each of the following equations AND ☑ check your answers.

1) $y+7=10$ ☑

$y=3$

2) $y-11=-5$ ☑

$y=6$

3) $4x=48$ ☑

$y=12$

4) $\frac{y}{-3}=9$ ☑

$y=-27$

5) $-65=-5m$ ☑

$m=13$

6) $7=\frac{c}{9}$ ☑

$c=63$

7) $\frac{3}{2}\cdot\frac{2}{3}p=14\cdot\frac{3}{2}$ ☑

$\boxed{p=21}$

8) $9=-\frac{3}{4}n$ ☑

$\boxed{n=-12}$

Think Back

What process do you use to simplify the expression below? P E M D A S

$(3^2+1)-3\cdot 2$

Now, to solve equations, we need to use S A D M E P (the reverse order of opearations!)

1) $3x-7=11$ ☑

$3x=18$

$\boxed{x=6}$

2) $5x+9=24$ ☑

$5x=15$

$\boxed{x=3}$

3) $-1=\frac{z}{3}-7$ ☑

$\frac{z}{3}=6$

$\boxed{z=18}$

4) $16=4y-4$ ☑

$4y=20$

$\boxed{y=5}$

Now you try!

5) $9y+2=29$ ☑

$9y=27$

$\boxed{y=3}$

6) $10=-3z-8$ ☑

$-3z=18$

$\boxed{z=-6}$

7) $\frac{x}{4}-3=5$ ☑

$\frac{x}{4}=8$

$x=32$

8) $-17=\frac{2}{3}m-9$ ☑

$\frac{3}{2}\cdot\frac{2}{3}m=8\cdot\frac{3}{2}$

$\boxed{m=-12}$

Distribute!

9) $3+4(z+5)=31$ ☑

$3+4z+20=31$

$4z+23=31$

$4z=8$

$\boxed{z=2}$

10) $23=-4m+2+m$ ☑

$23=-3m+2$

$21=-3m$

$\boxed{-7=m}$