

Name \_\_\_\_\_ Period \_\_\_\_\_

### Notes: Solving Equations

The goal of solving \_\_\_\_\_ equations is to find

\_\_\_\_\_

that makes the equation \_\_\_\_\_.

To solve a one-step equation you need to \_\_\_\_\_

the \_\_\_\_\_ ( \_\_\_\_\_ ).

Non-isolated variable examples:

$$x - 5 = 7$$

$$11 = y - 4$$

$$a + \frac{1}{2} = -3$$

Isolated variable examples:

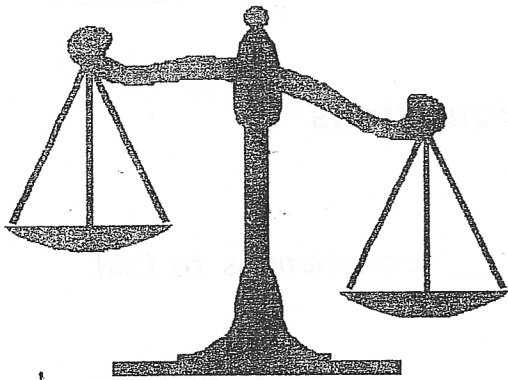
$$x = 15$$

$$-8 = z$$

$$e = 2.3$$

1.) To \_\_\_\_\_ a \_\_\_\_\_ you use  
\_\_\_\_\_ to \_\_\_\_\_ the  
\_\_\_\_\_ in the equation.

2.) Then, \_\_\_\_\_  
\_\_\_\_\_.



Equations are always balanced.  
What you do to one side you do to  
the other side to keep the equation  
equal.

Examples of inverse operations: addition & subtraction  
multiplication & division

Solve:  $x + 7 = 10$  the operation in the equation is \_\_\_\_\_

$x + 7 - 7 = 10 - 7$  the \_\_\_\_\_ of adding 7 is  
subtracting 7

$$x + 0 = 3$$

DO THIS TO BOTH SIDES

$$x = 3$$

The variable is \_\_\_\_\_

EQUATION SOLVED!

Solve:  $-11 = y - 2$  the operation in the equation is \_\_\_\_\_

\_\_\_\_\_ the \_\_\_\_\_ of subtracting 2 is  
adding 2, do this to BOTH SIDES.

\_\_\_\_\_

\_\_\_\_\_ The variable is \_\_\_\_\_.

EQUATION SOLVED!

Solve:  $6x = 72$  the operation in the equation is \_\_\_\_\_

$$\frac{6x}{6} = \frac{72}{6} \text{ the } \underline{\hspace{2cm}} \text{ of multiplying is } \underline{\hspace{2cm}} \text{ by } 6$$

NOTICE THAT WE DIVIDE BOTH SIDES

$$x = 12 \text{ The variable is } \underline{\hspace{2cm}}.$$

Solve:  $\frac{x}{4} = 7$  the operation in the equation is \_\_\_\_\_

$$4 \cdot \frac{x}{4} = 7 \cdot 4 \text{ the opposite of dividing is } \underline{\hspace{2cm}}$$

NOTICE THST WE MULTIPLY BOTH SIDES

$$x = 28 \text{ the variable is } \underline{\hspace{2cm}}.$$