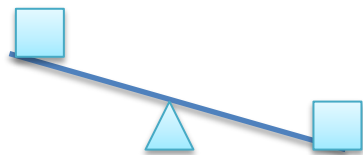
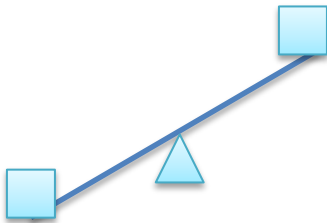


What do the diagrams below mean to you? What could be in each box? Assume each box is not identical.



When two expressions represent the \_\_\_\_\_ amount, they are said to be \_\_\_\_\_;

two equal expressions make an \_\_\_\_\_.



Example 1:



The reason we can do this is because inverse operations were performed on both sides of the \_\_\_\_\_ in order to isolate the variable.

**Inverse Operations:**

## Foldable Activity

Now with the help of your foldable solve and write the properties.

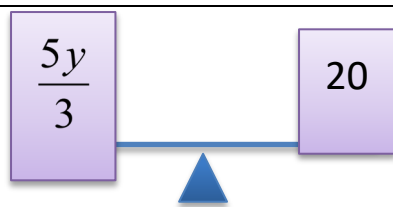
$$25 = n - 17$$

**Equivalent**  
**Equations:**

Solve and Justify with listing the properties used.

$$b - 21 = 42$$

$$(m - 3) + 5 = 12$$



Solve, show each step and justify each step by listing the properties

$$7w = 105$$

$$\frac{4}{5}x = 16$$

$$\frac{3}{4}\left(\frac{2}{3}a\right) = 24$$

Word Problems: *Write the question, write the equation that best suits the question, and use inverse operations to solve.*

Example 1: Linda gave  $\frac{1}{6}$  of her cookies to her sister. She gave her sister 4 cookies.

Variable:



Example 2: One serving of soybeans contains 10 grams of protein, which is 4 times the amount of one serving of kale.

Variable:

Example 3: The Earth's radius is 6,371km, which is 2,981km longer than the radius of Mars.

Variable:



**Ticket out the Door**

*Explain the role inverse operations play in solving equations. Use  $2x = 8$  and  $y - 4 = 9$  as examples.*