Warm-up

Nov 18

1) What does m equal???

$$m + 7 = 23$$

 $m = 16$

2) What does v equal???

Developing Equations Using Letter Variables

What is an Equation?

- An equation is a mathematical statement that shows two expressions are equal.
 - > Example: 4+5=9
- The equal sign (=) means "is the same as." Both sides of the equation must have the same value.

Preservation of Equality

- When we perform the same operation on both sides of an equation, the equality stays true (it is preserved).
 - > Example: If 3+2=5, adding 4 to both sides gives:

- BOTH SIDES STILL EQUAL 9 ★



*This is why whatever we do to one side of the "=", we have to do to the other!

How to Verify the Equality of an Equation

- 1. Simplify Both Sides:
 - > Calculate the value of both sides to check if they are the same.
 - > Example: 7+3=5+5

Let's try using variables:

(a)
$$6 + n = 9$$

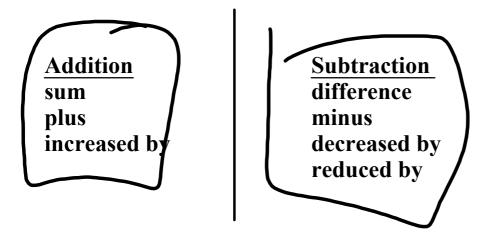
 $6 + n = 9 - 6$
 $n = 3$
(b) $20 + v = 14$
 $20 - 20 + v = 14$
 $10 - 16 = 14$
(c) $10 - 16 = 4$
 $10 - 16 = 4$
 $10 - 16 = 4$
 $10 - 16 = 4$
 $10 - 16 = 4$

How to Develop Equations Using Variables

- 1. Describe a situation in words
 - > A number plus 4 equals 9

> A number subtract 6 equals 12

Words you should look for to decide which operation (addition or subtraction) to use:



YOU TRY:

(A) A number plus 7

(B) The difference of a number and 3

(C) The sum of a number and 5 C + 5



Homework - DWorksheet "U