5.1 Solutions of Equations

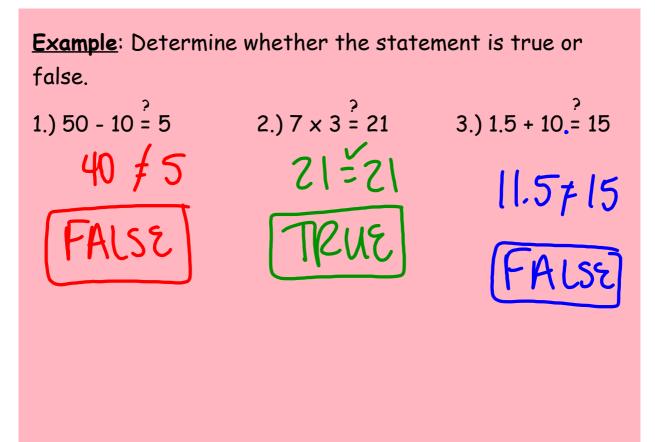
KEY WORDS

Equations -> a statement that uses an equal sign to show that two mathematical expressions are equivalent

No equal sign (z) -> shows that two expressions are not equivalent

Solution to an Equation -> a value that makes the equation true

Example: Olivia volunteers at an animal shelter and ordered 50 bags of cat food for \$1399.50. Now she cannot remember if she chose the brand that costs \$29.99 for each bag or \$27.99 for each bag. Determine which price makes the equation 50x = \$1399.50 true to identify which brand Olivia chose. The 827.99 brand 50x = 1399.5 is the solution. 50x = 1399.5 is the solution. $50 \cdot 29.99 \stackrel{?}{=} 1399.5$ 1399.5 = 1399.51399.5 = 1399.51399.5 = 1399.51399.5 = 1399.51399.5 = 1399.51399.5 = 1399.51399.5 = 1399.51399.5 = 1399.51399.5 = 1399.51399.5 = 1399.51399.5 = 1399.51399.5 = 1399.51399.5 = 1399.5



Example: Determine which value of x, if any, is a solution to each equation. Write "none" if none of the choices are a solution to the equation.

4.) x + 2.5 = 13 ? 9.5 + 2.5 = 13	×=9.5 <u>×=10</u> 10.+7.5=13	x = 10.5 ;
12 \$ 13		13 = 13
5.) 3x + 2 = 44 3·12+2 ≟ 4 4	3.8+2= 44 3	<u>x = 14</u> · y + Z = Y 44
36+2 38744	24+2	42 + 2 44 = 44 √
6.) 2(x - 10) = 10, Z (15 - 10) = 10	x = 15 Z(10-10) = 10	•
2.5	2.0710	
7.) 4x = 13 - 5 %		<u> </u>
4-1=8	4·Z ² 8	4.3-28
478	8 = 8v	1278