Identifying Solutions to Equations and Inequalities

Part2

Worksheet 1

Determine whether or not the given value is a solution to the equation or inequality. Write YES or NO. Show work to prove your answer.

1) $2x + 7 = 17;$ $x = 5$

2) $5w < 3w + 6;$ $w = 2$

3) $35 = 7h - 8;$ $h = 6$

4) $63 < 3 + 6r;$ $r = 10$

5) $63 \leq 3 + 6r;$ $r = 10$

6) $50 - 3x = 4^2;$ $x = 12$

7) $9 + 6a = 57;$ $a = 8$

8) $9k + 3 < 8 \cdot 3;$ $k = 2$

9) $10 + 4 > 20 - 3v;$ $v = 4$

10) $5g - 15 \geq 60;$ $g = 15$

11) $9h = 20 + 6h;$ $h = 7$

12) $79 - 8p = 34 + p;$ $p = 5$

13) $8 + 6c \leq 9c - 30;$ $c = 4$

14) $8r + 1 = 5r + 10;$ $r = 3$

15) $2u + 3 = 18 - 3u;$ $u = 4$

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Worksheet 2

State whether the given value is a solution to the equation or inequality. Write YES or NO.

CHALLENGE: If the value is not a solution, can you determine which value(s) would be a solution?

1. $5x - 8 = 18 + 4$, for $x = 6$

2. $4x^2 - 5(5) = 12$, for $x = 3$

3. $(8 - n)^2 + 13 \geq 23$, for $n = 3$

4. $17x - 8(2x - 4) > 32$, for $x = 3$

5. $2x + 12 + 8x > 32$, for $x = 2$

6. $6(3x - 2) + 5 < 50$, for $x = 3$

Test each value in the 'Replacement Set' column to determine if the values are solution(s) to the given equation/inequality. Be sure to list all numbers that work to make the statement true. There may be 1, more than one, or no solutions to each. ** Do your work in the space below the chart.

	Equation	Replacement Set	Solution(s)
7.	$5x + 2 = 17$	{1, 2, 3, 4}	
8.	$3x - 2 > 4$	{2, 3, 4, 5}	
9.	$2x^2 + 4 = 54$	{1, 3, 5, 7}	
10.	$7x - 7 < 30$	{2, 4, 6, 8}	
11.	$2(2x + 4) > 20$	{3, 5, 6, 9}	
12.	$5x - 6 = 24$	{1, 2, 3, 4}	