

## Class work: Section 2 Topic 2, 3

1.

Select the steps you would take to solve the equation. Select all that apply.

$$15x + 17 = -13$$

- A. Division Property of Equality
- B. Subtraction Property of Equality
- C. Addition Property of Equality
- D. Multiplication Property of Equality

Order the steps you selected above to solve the equation. 1.         , 2.         

2.

Suppose you want to solve the equation  $2a + b = 2a$ , where  $a$  and  $b$  are real numbers. Complete the explanation to describe the solution to this equation.

If you subtract  $2a$  from each side, you get the statement  $b =$                                  .

Since  $a$  and  $b$  are real numbers, this statement is   (true / false)  .

Therefore, there                                 

are infinitely many solutions
Is one solution
Is no solution

( choose one)

3.

Choose from the given answer choices to justify each step in solving the equation below.

Multiplication Property of Equality

Given

Division Property of Equality

Addition Property of Equality

Distributive Property

Subtraction Property of Equality



Statements	Reasons
1. $20 - 3h = 2$	1.
2. $\begin{array}{r} 20 - 3h = 2 \\ -20 \quad \quad = -20 \\ \hline \end{array}$	2.
3. $-3h = -18$	3. Equivalent Equation
4. $\frac{-3h}{-3} = \frac{-18}{-3}$	4.
5. $h = 6$	5. Equivalent Equation

4.

A teacher asked the class to solve the equation  $3(x + 2) = 21$ . Robert wrote  $3x + 6 = 21$  as his first step. Which property did Robert use?

- A. Associative Property
- B. Commutative Property
- C. Distributive Property
- D. Zero Property of Addition

5.

Which process was used to obtain the equation shown in Step 2?

**Step 1:**  $\frac{x}{3} - \frac{1}{4} = 6$

**Step 2:**  $4x - 3 = 72$

- A. Added  $\frac{1}{4}$  to both sides of the equation
- B. Added 66 to both sides of the equation
- C. Divided both sides of the equation by 12
- D. Multiplied both sides of the equation by 12

6.

Examine the given solution process and identify the property that justifies each step.

Multiplication Property of Equality

Division Property of Equality

Addition Property of Equality

Distributive Property

Subtraction Property of Equality

Combine Like Terms

Associative Property of Equality

Commutative Property of Equality

Statement	Reason
$2\left(\frac{1}{2}x + 4x - 7\right) = 4x + 5$	<i>Given</i>
$x + 8x - 14 = 4x + 5$	
$9x - 14 = 4x + 5$	<i>Equivalent Equation</i>
$9x - 14 + 14 = 4x + 5 + 14$	
$9x = 4x + 19$	<i>Equivalent Equation</i>
$9x - 4x = 4x - 4x + 19$	
$5x = 19$	<i>Equivalent Equation</i>
$\frac{5x}{5} = \frac{19}{5}$	
$x = \frac{19}{5}$	