

2.1 Solving Linear Equations - Day 2

You may be asked to identify properties used at each step.

Golden Sheet of Properties

Properties of Operations
Properties of Equality
Properties of Inequality (later in chapter)

Reasons other than properties:

- Given
↳ used with the given problem
- Simplify
↳ used for adding, subtracting, multiplying, dividing

Example:

1. $x - 4 = 0$

$$x - 4 + 4 = 0 + 4$$

$$x + 0 = 0 + 4$$

$$x = 4$$

Given

Addition Property of Equality

Additive Inverse Property

Additive Identity Property

Page 2

Page 3

2. $\frac{x}{7} + 5 = 1$

$$\frac{x}{7} + 5 - 5 = 1 - 5$$

$$\frac{x}{7} + 0 = 1 - 5$$

$$\frac{x}{7} = 1 - 5$$

$$\frac{x}{7} = -4$$

$$\frac{x}{7}(7) = -4(7)$$

$$x(1) = -4(7)$$

$$x = -4(7)$$

$$x = -28$$

Given

Subtraction Property of Equality

Additive Inverse Property

Additive Identity Property

Simplify

Multiplication Property of Equality

Multiplicative Inverse Property

Multiplicative Identity Property

Simplify

3. $4m - 9 = 19$

$$4m - 9 + 9 = 19 + 9$$

$$4m + 0 = 19 + 9$$

$$4m = 19 + 9$$

$$4m = 28$$

$$\frac{4m}{4} = \frac{28}{4}$$

$$m(1) = \frac{28}{4}$$

$$m = \frac{28}{4}$$

$$m = 7$$

Given

Addition Property of Equality

Additive Inverse Property

Additive Identity Property

Simplify

Division Property of Equality

Multiplicative Inverse Property

Multiplicative Identity Property

Simplify

Page 4

Page 5

HOMEWORK

Worksheet HW 2.1 - Day 2

Page 6