

Warm-Up:

1) There are six time zones in the United States. The eastern part of the US, including New York City, is in the Eastern Time Zone. The central part of the US, including Chicago, is in the Central Time Zone, which is one hour behind New York City. San Diego, which is in the Pacific Time Zone, is three hours behind Eastern Time. Write and solve an equation to determine what time it is in California if it is noon in New York.

$$a = \text{time in California}$$

$$12 - 3 = a$$

$$a = 9 \text{ am}$$

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$$38, 32, 56$$

$$32) 15,579 + 6,220 + 18,995 = g$$

$$g = 40,794 \text{ glasses}$$

$$38) \begin{array}{l} c = \text{cost for adult} \\ x = \text{cost for child} \\ 2c + 3x < 200 \end{array}$$

$$2(41.99) + 2(26.99) < 200$$

$$164.95 < 200$$

They can go.

$$56) P = 3 + 2(2) + 3(6) + 2(12) + \frac{1}{2}(5)$$

J

Aug 30-11:46 AM

## Section 1-4: Identity and Equality Properties

**Identities:**Additive Identity:

The sum of a number and zero is the original number.

$$a + 0 = a$$

Multiplicative Identity:

The product of a number and one is the original number.

$$a \cdot 1 = a$$

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**Inverses:**Additive Inverses:

Two numbers that add to zero.

$$2 + -2 = 0$$

Multiplicative Inverses:

Two numbers that multiply to one.

$$2 \left(\frac{1}{2}\right) = 1$$

Additive inverses are opposites.  
Multiplicative inverses are reciprocals

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**Multiplicative Property of Zero:**

Any number times zero is equal to zero.

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**Properties of Equality:**

**Reflexive Property:** For any real number  $a$ ,  $a = a$ .

**Symmetric Property:** For all real numbers  $a$  and  $b$ , if  $a = b$ , then  $b = a$ .

**Transitive Property:** For all real numbers  $a$ ,  $b$ , and  $c$ , if  $a = b$  and  $b = c$ , then  $a = c$ .

**Substitution:** If  $a = b$ , then  $a$  may be replaced with  $b$  and  $b$  may be replaced with  $a$ .

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Examples:

Find the value of  $n$  in each equation. Then name the property that is used.

1)  $n \cdot 12 = 0$

$$n = 0$$

Mult. Property  
of Zero

2)  $n \cdot \frac{1}{5} = 1$

$$n = 5$$

Mult. Inverse

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Examples:

Evaluate. Name the property used in each step.

3)  $4(9 - 9) + \frac{1}{4}(7 - 3)$

$$4(0) + \frac{1}{4}(7 - 3)$$

Add. Inverse

$$4(0) + \frac{1}{4}(4)$$

Substitution

$$0 + \frac{1}{4}(4)$$

Mult. Property  
of Zero

$$0 + 1$$

Mult. Inverse

$$1$$

Add. Identity

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Homework: pg 23-25 #8-17 all, 20, 24, 28, 38, 40, 41

Section 1-4 Vocab

Book Covers By Sept. 2nd

[Quiz over Sections 1-1, 1-2, 1-3 Next Class](#)

Aug 24-12:19 PM