2.5 - Properties of Numbers

Vocabulary:

none

1 EXAMPLE Name the property each equation illustrates.

a. $3 \cdot a = a \cdot 3$ commutative property of multiplication

comm. prop. of $\cdot$

b. $p \cdot 0 = 0$ multi. prop. of 0

c. $6 + (-6) = 0$ inverse prop. of +

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Name the property that each equaation illustrates.

#1. $\frac{-6}{7} + 0 = \frac{-6}{7}$ identity prop. of +

#5. $-0.3 + 0.3 = 0$ inverse prop. of +

#9. $-0.5 \cdot (-2) = 1$ inverse prop. of $\cdot$

$-\frac{1}{2} \cdot -2$

2 EXAMPLE Suppose you buy a shirt for $14.85, a pair of pants for $21.95, and a pair of shoes for $25.15. Find the total amount you spent.

$14.85 + 21.95 + 25.15$

$14.85 + 25.15$

$40 + 21.95$

$\$61.95$

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#16. You buy 3 grapefruits for $1.50, a pound of apples for $0.79, some grapes for $2.50, and some bananas for $1.21. Find the total cost of the fruit.

$3(1.50) + 0.79 + 2.50 + 1.21$

$4.50 + 0.79 + 2.50 + 1.21$

$7 + 2$

$9

3 EXAMPLE Simplify $3x - 4(x - 8)$. Justify each step.

$3x - 4x + 32$ distributive prop.

$-1x + 32$ combine like terms

$-x + 32$

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#44. Give a reason to jusity each step.

$5t + 6 + 3(t + 2)$

① $= 5t + 6 + 3t + 6$ distributive prop.

② $= 5t + 3t + 6 + 6$ comm. prop. of +

$= 5t + 3t + (6 + 6)$ assoc. prop. of +

$= 5t + 3t + 12$ def. of addition

$= (5 + 3)t + 12$ assoc. prop.

$= 8t + 12$ def. of addition

Homework Problems:

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