

= / same thing

Properties of real numbers

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Change order

Commutative Properties - you can move around the numbers in an addition or multiplication equation and it still works

$$a+b = b+a \quad 3 \cdot 7 = 7 \cdot 3 \quad a \cdot b = b \cdot a \quad 2 \cdot 5 = 5 \cdot 2$$

Associative Property - you can move whole group around

and it still works - $(a \cdot b) \cdot c = a \cdot (b \cdot c) = 5 \cdot (7 \cdot 3) =$

$$(a \cdot b) \cdot c = a \cdot (b \cdot c) = 2 \cdot (4 \cdot 3) = (2 \cdot 4) \cdot 3$$

Multiplicative ID - multiply by one to keep identity

$$a \cdot 1 = a \quad 3 \cdot 1 = 3$$

Additive ID - add zero to any number to keep identity

$$b + 0 = b \quad 25 + 0 = 25$$

Distributive - multiply by each number inside the () & be careful w/ -

$$a(b+c) = a \cdot b + a \cdot c \quad 2(5-7) = 2 \cdot 5 - 2 \cdot 7$$

Zero Property - anything multiplied by 0 is 0

$$a \cdot 0 = 0 \quad 2,465 \cdot 0 = 0$$

Multiplicative Inverse - multiply by the reciprocal to 1

$$a \cdot \frac{1}{a} = 1 \quad \frac{1}{10} \cdot 10 = 1$$