

DO NOW

Simply the following:

1) $-9 - [-(-4)]$

2) $-4|-7| + 8|-3|$

2.2 & 2.5

Properties of Algebra

Commutative Property

“Commutate”

Order doesn't matter

COMMUTATIVE PROPERTY

$$a + b = b + a$$

$$7 + 8 = 8 + 7$$

$$(-3)4 = 4(-3)$$

$$7 \times 8 = 8 \times 7$$

$$12a = a \times 12$$

- The commutative property only works for addition and multiplication

Associative Property

“Associate”

Grouping doesn't matter

ASSOCIATIVE PROPERTY

$$(a+b)+c = a+(b+c)$$

$$(7+8)+2 = 7+(8+2)$$

$$(a \times b) \times c = a \times (b \times c)$$

$$(7 \times 8) \times 2 = 7 \times (8 \times 2)$$

- The associative property only works for addition and multiplication

Distributive Property

“Distribute”

Giving out
multiplication

DISTRIBUTIVE PROPERTY

$$a(b+c) = ab + ac$$

$$5(7+8) = 5 \cdot 7 + 5 \cdot 8$$

$$3(a - 8) = 3a - 3 \cdot 8$$

- Multiplying a sum or difference by some number is the same as multiplying each term by that same number.

SYMMETRIC PROPERTY

If $a = b$, then $b = a$

If $x = -7$, then $-7 = x$

TRANSITIVE PROPERTY

If $a = b$ and $b = c$, then $a = c$

If $x = y$ and $y = 9$, then $x = 9$

REFLEXIVE PROPERTY

$$a = a$$

$$5 = 5$$