3.3 Addition and Subtraction

**EQ:** Does the order in which you perform an operation matter?

**Equivalent Expressions:** "equal" - expressions that have the same value

\[ \text{EX: } 5 + 3 = 3 + 5 \]

**Commutative Property:** change the order

\[ \text{EX: } (7 + 5) + 2 = 7 + (5 + 2) \]

These only work for addition and multiplication

**Addition Property of Zero:** anything plus zero is that number.

Multiplication Property of Zero:** anything times zero is zero

Multiplication Property of One:** anything times one is itself.

**EX1:** \[ 7 + x + 12 \]

\[ x + 7 + 12 \]

\[ x + 19 \]

**EX2:** \[ 5 \cdot (1 + y) \]

\[ (5 \cdot 1) + y \]

\[ 55y \]

**Associative Prop of Multiplication**

\[ 9 \cdot x \cdot 0 = 0 \]

\[ 4.5 \cdot r \cdot 1 = 4.5r \]

\[ 4.5r \cdot 1 = \]