

## ASSOC

To help me use the Associative Property of addition and multiplication.

**A**re any numbers or letters grouped by parentheses?

- Numbers/letters in at least one equation is grouped by parentheses.

$$(4 + 7) + 3 = 14 \quad 4 + 7 + 3 = 14$$

$$3 \times 6 \times 8 = 144 \quad (3 \times 6) \times 8 = 144$$

$$(7 + 5) + 7 = 19 \quad 7 + (5 + 7) = 19$$

- In each set of equations, numbers are grouped by parentheses for at least one of the two equations.

**S**ee if the groupings change from one equation to the next.

- How numbers are grouped for each equation is different.



$$(4 + 7) + 3 = 14 \quad 4 + 7 + 3 = 14$$

parentheses (group)      no parentheses (no group)



$$3 \times 6 \times 8 = 144 \quad (3 \times 6) \times 8 = 144$$

no parentheses (no group)      parentheses (group)



$$(7 + 5) + 8 = 20 \quad 7 + (5 + 8) = 20$$

“7 + 5” grouped      “5 + 8” grouped

**S**ame numbers/letters, signs, and total?

- Equations must have the same numbers or letters.
- Equations must have the same operation signs.
- Equations have the same total

**O**ne, two, ***THREE*** numbers/letters or more.

- Equations must have three numbers or more.

**C**an be *all* addition signs or *all* multiplication signs.

- Each equation must have only addition signs or only multiplication signs.