**Objective:**

**Do Now:** A recent study showed that 9 out of 10 doctors recommend a new toothbrush.

1. If 100 doctors were polled, how many recommended the toothbrush?
2. If 50 doctors were polled, how many recommended the toothbrush?
3. If 85 doctors were polled, how many recommended the toothbrush?

**Vocabulary:**

The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of a to b is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. It can also be written as \_\_\_\_\_\_\_\_.

Simplify the given ratios:

A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is an equation that equates \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Cross product Property**

**Reciprocal Property**

**Solving Proportions:** Use the cross product property to solve the proportions**.**

**Using Proportions:** The ratio of two side lengths of the triangle is given. Solve for the variable.

1. PQ: QR is 3:4 2. SU: ST is 4:1