Geometry **7.5 Proportions in Triangles** Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_per\_\_\_\_

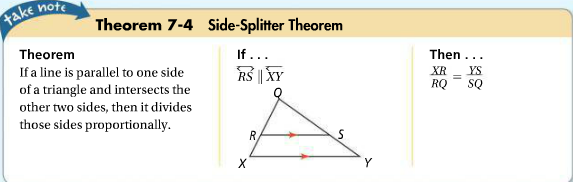
**Objective:** *The students will be able to use the Side-Splitter Theorem and the Triangle-Angle-Bisector theorem.*



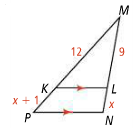
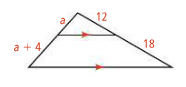
I was looking for some

 but this is what I found instead;

…well if that joke didn’t split your sides, this theorem will! ☺

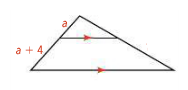


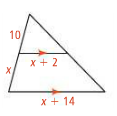
Let’s use the Side-Splitter Theorem;

1. Find the value of the variable in each diagram;
2. b) 

\*\*\*\*\*Please take CAREFUL NOTICE!!!\*\*\*\*\* The Side-Splitter Theorem CANNOT be used in examples like the following, when some of the information given is about the parallel sides, rather than both “split” sides.

1. In a case like this, we use the properties of **SIMILAR** triangles to solve! (**NOT Side-Splitter**!)

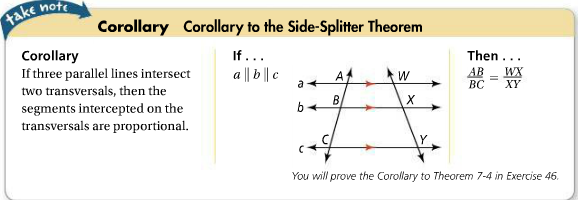


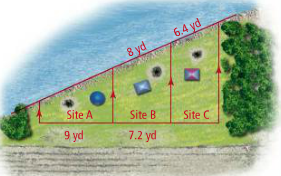
1.  b)

12

30

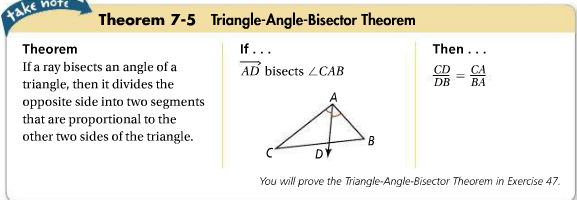
Again… **NOT Side-Splitter**!)

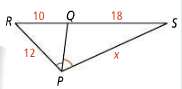
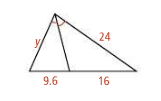




1. 

**There is another theorem that helps us find missing sides in triangles;**



1. Find the value of x;
2.  b) 

**HW pgs 474-476 #9 – 35 odds.**  *(plus # 37 for geo 21)*