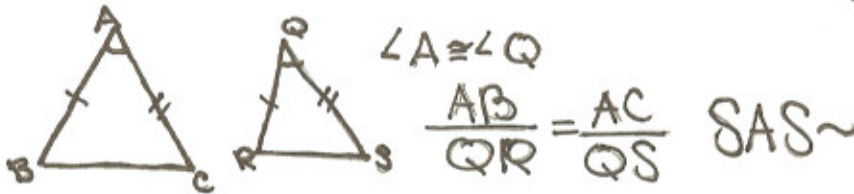
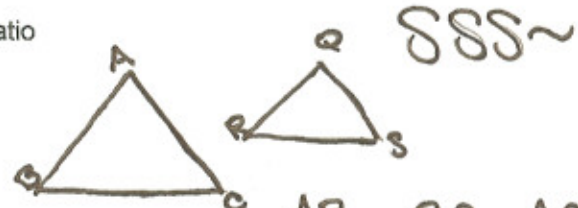


### Chapter 7 Review

- A ratio is a comparison of two qualities.
- A proportion is a statement that two ratios are equal.
- You can write a proportion in these forms:  $a/b=c/d$ ,  $a:b=c:d$
- Extended proportion  $6/24=4/16=1/4$
- Properties of proportion  $a/b=c/d$  is equivalent to  $ad=bc$ ,  $b/a=d/c$ ,  $a/c=b/d$ ,  $a+b/b=c+d/d$

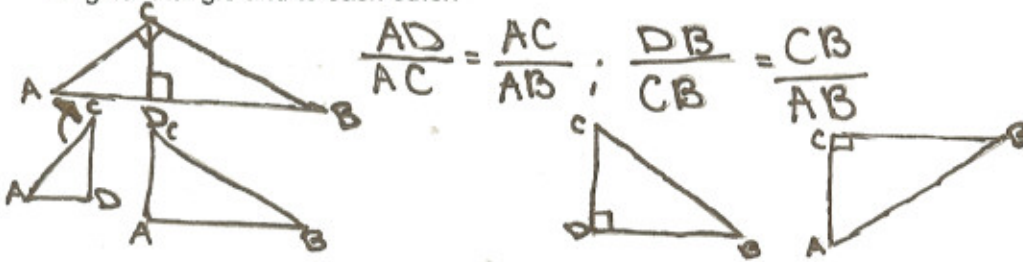
$a/b=c/d$   $ad=bc$  means  $a:b=c:d$  extremes

- Two polygons are similar if 1) corresponding angles are congruent. 2) corresponding sides are proportional.
- The ratio of the lengths of corresponding sides is a similarity ratio



$$\frac{AB}{QR} = \frac{BC}{RS} = \frac{AC}{QS}$$

- The altitude of the hypotenuse of a right triangle divides the triangles that are similar to the original triangle and to each other.

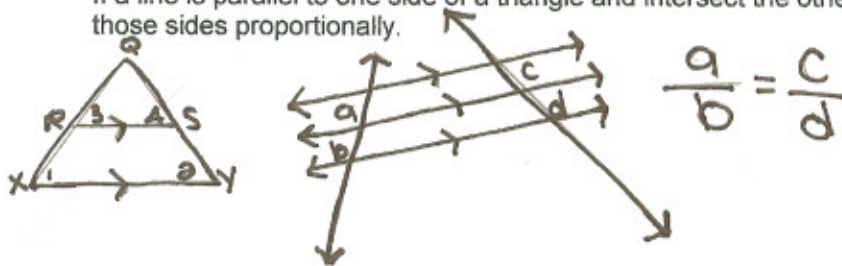


$$\frac{AD}{AC} = \frac{AC}{AB} ; \frac{DB}{CB} = \frac{CB}{AB}$$



ex.  $\frac{4}{x} = \frac{x}{4+5}$   $36 = x^2$   $6 = x$   $\frac{4}{y} = \frac{y}{5}$   $y^2 = 20$   $y = 2\sqrt{5}$

- If a line is parallel to one side of a triangle and intersect the other two sides, then it divides those sides proportionally.



$\vec{AD}$  bisects  $\angle CAB$   
 $\frac{CD}{DB} = \frac{CA}{BA}$

