

## Geometry- Lesson 7-3 Notes

Name	Description	Hypothesis	Conclusion
<b>Angle Angle Similarity Postulate</b>  (AA~)	If ___ angles of one triangle are _____ to ___ angles of another triangle, then the triangles are _____		
<b>Side Side Side Similarity Theorem</b>  (SSS~)	If ___ sides of one triangle are _____ to the three _____ sides of another triangle, then the triangles are _____		
<b>Side Angle Side Similarity Theorem</b>  (SAS~)	If ___ sides of one triangle are _____ to ___ sides of another triangle and their _____ are congruent, then the triangles are _____		

### Properties of Similarity:

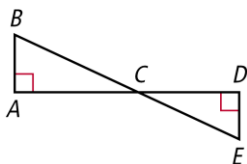
**Reflexive Property of Similarity:** (Reflex. Prop of ~) \_\_\_\_\_

**Symmetric Property of Similarity:** (Sym. Prop of ~) \_\_\_\_\_

**Transitive Property of Similarity:** (Trans. Prop of ~) \_\_\_\_\_

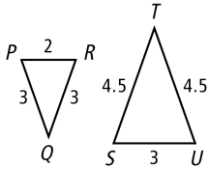
### Examples:

1. Explain why the triangles are similar and write a similarity statement.

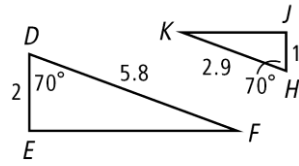


2. Verify that the triangles are similar.

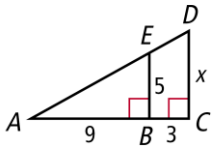
a.  $\triangle PQR$  and  $\triangle STU$



b.  $\triangle DEF$  and  $\triangle HJK$

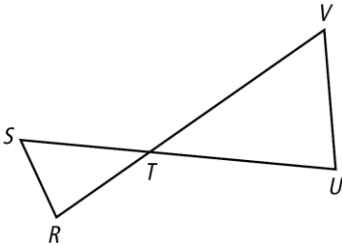


3. Explain why  $\triangle ABE \sim \triangle ACD$ , and then find CD.



4. Given:  $3UT = 5RT$  and  $3VT = 5ST$

Prove:  $\triangle UVT \sim \triangle RST$



5. Given: M is the midpoint of  $\overline{JK}$

N is the midpoint of  $\overline{KL}$

P is the midpoint of  $\overline{JL}$

Prove:  $\triangle JKL \sim \triangle NPM$

