Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**3 Ways to Prove Triangles are Similar**

**AA~ Postulate**:

If two angles of one triangle are congruent to two angles of another, then the triangles are similar.

**SAS~ Postulate**:

If one angle of one triangle is congruent to the one angle of another triangle and the adjacent sides are proportional, then the triangles are similar.

**SSS~ Postulate**:

If all three sides of one triangle are proportional to corresponding sides of another triangle, then the triangles are similar.

**You can mark vertical angles and shared angles congruent!**

**Explain why the triangles are similar (SSS~, SAS~, or AA~) and write a similarity statement.**

1. RQS~\_\_\_\_\_\_\_\_\_\_ by \_\_\_\_\_\_

1. HGJ~\_\_\_\_\_\_\_\_\_\_ by \_\_\_\_\_\_

1. ABC~\_\_\_\_\_\_\_\_\_\_ by \_\_\_\_\_\_

1. ADE~\_\_\_\_\_\_\_\_\_\_ by \_\_\_\_\_\_

1. QPR~\_\_\_\_\_\_\_\_\_\_ by \_\_\_\_\_\_

1. ABC~\_\_\_\_\_\_\_\_\_\_ by \_\_\_\_\_\_



1. GHJ~\_\_\_\_\_\_\_\_\_\_ by \_\_\_\_\_\_

1. AEF~\_\_\_\_\_\_\_\_\_\_ by \_\_\_\_\_\_



**Explain why the triangles are similar (SSS~, SAS~, or AA~) and find each length.**

9) Similar by \_\_\_\_\_\_ and **GK** = \_\_\_\_\_

10) Similar by \_\_\_\_\_\_ and **SU** = \_\_\_\_\_

11) Similar by \_\_\_\_\_\_ and **DE** = \_\_\_\_

12) Similar by \_\_\_\_\_\_ and **RQ** = \_\_\_\_

