

## Chapter 9 Congruence and Similarity

### Dear Family,

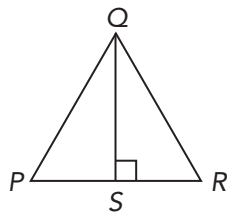
In this chapter, your student will learn about congruent and similar figures. Some of the skills your student will practice are:

- applying the concepts of congruence and similarity
- recognizing that if two figures are related by a translation, reflection, or rotation, then the figures are congruent
- recognizing that if two figures are related by a dilation, then the figures are similar
- describing transformations that demonstrate the congruence or similarity of two figures

### Activity

Understanding congruent figures and their corresponding parts is an important skill that students will use in geometry classes. You can help your student practice this skill with this activity.

- Sketch a pair of congruent triangles like the ones shown.



- Ask your student to describe a transformation that maps  $\triangle PQS$  onto  $\triangle RQS$  (a reflection in  $QS$ ).
- With your student, list the six pairs of corresponding congruent parts of  $\triangle PQS$  and  $\triangle RQS$ . For example,  $\angle PSQ \cong \angle RSQ$ .
- For an extension of this activity, suppose that  $\triangle PQR$  is an equilateral triangle, and the length of each side is 10 in. How many other side lengths and angle measures in  $\triangle PQS$  and  $\triangle RQS$  can you and your student find?

### Vocabulary to Practice

Two figures are **congruent** if they have the same shape and size. The **corresponding** sides and angles of the two figures are all congruent.

Two figures that have the same shape, but not necessarily the same size, are **similar**. The corresponding angles of two similar figures are congruent.



#### Online Resources

For additional Parent Resources [my.hrw.com](http://my.hrw.com)