

Chapter 7 Geometric Construction

Dear Family,

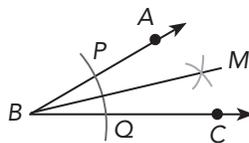
In this chapter, your student will learn about geometric constructions. Some of the skills your student will practice are:

- identifying and constructing angle bisectors and perpendicular bisectors of segments
- constructing triangles and quadrilaterals
- solving real-world problems involving scale factors

Activity

Understanding angle bisectors is important for math classes involving geometry. You can help your student practice this skill with this activity.

- Use a straightedge to draw an acute angle. Measure the angle with a protractor and draw two more angles that are congruent to it.
- Bisect the first angle by using the protractor to draw an angle that is half the measure of the first angle.
- Use a compass and straightedge to construct the bisector of the second angle.
- Bisect the third angle by folding the paper so that one side of the angle lies on top of the other side, then unfolding the paper.
- Compare the three bisectors, measuring all of the angles with a protractor. How accurate are the construction and the paperfolding methods? Which method do you prefer?



Vocabulary to Practice

A point that is the same distance from two other points is **equidistant** from the points.

An **angle bisector** is a line or a ray that divides the angle into two congruent parts.

The **midpoint** of a segment is the point that is equidistant from the segment's endpoints.

The **perpendicular bisector** of a segment is perpendicular to the segment and contains its midpoint.

If two figures are similar, you can find their **scale factor** by finding the ratio of the lengths of two corresponding sides.



Online Resources

For additional Parent Resources my.hrw.com