Name _____ Date _____

Additional Activity 1: Partner Polygons

Work with a group.

You will need a 2-m length of fabric elastic and index cards.

- ➢ Brainstorm a list of attributes of polygons.
  You may include attributes such as,
  2 pairs of parallel sides, all angles equal, and number of sides.
  Write the attributes from your list on index cards.
  Shuffle the index cards and place them face down in a pile.

- ➢ Tie the elastic to form a large loop.
  Take turns to draw a card from the pile.
  Loop the elastic around your hands.
  Model a polygon with the attribute described on the card.
  If it is not possible, draw another card to include with the previous card.

Take It Further:
Try to create the next polygon or angle using the fewest moves.
A move consists of moving only one hand.

Master 3.11   **Additional Activity 2: Pattern Block Properties**

Work with a partner.
You will need Pattern Blocks and a brown paper bag.

➢ Place the Pattern Blocks in the bag.

➢ Take turns to think of a Pattern Block.
   Do not tell which block you are thinking of.
   When it is your turn, describe the block you are thinking of.
   Do not tell what shape it is.
   Talk about the sides and the angles in your description.

➢ Without looking, your partner reaches into the bag and tries to find
   the Pattern Block that matches your description.

Take It Further:
Take turns to think of a polygon.
Without telling the name of the polygon, describe the polygon to your partner.
Your partner tries to sketch the polygon you described.

Master 3.12 **Additional Activity 3: Exploring Paper Triangles**

Work with a partner.
You will need scissors, paper, a ruler, and a protractor.

> ➤ Cut out a large paper triangle.
>   Measure the side lengths and the angles.
>   Record the measures on the triangle.

> ➤ Fold one side of the triangle.
>   The fold line should be parallel to one side of the triangle, as shown.
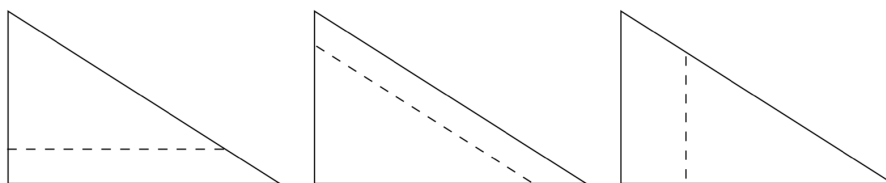
> ➤ Measure the side lengths and angles of the new triangle.
>   Record the new measures.

> ➤ Compare the side lengths and angles of the original triangle to the side lengths
>   and angles of the smaller triangle formed by folding.
>   What do you notice?

Take It Further
Try different types of triangles, such as scalene and obtuse.
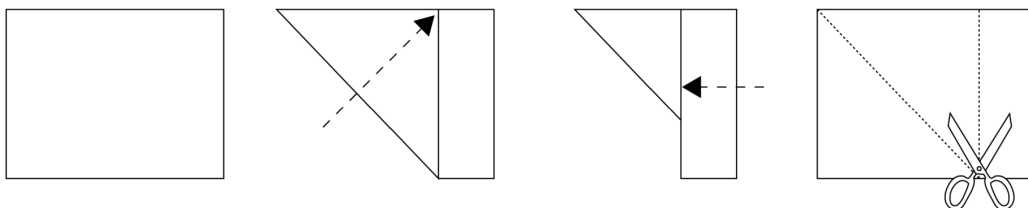What do you notice?

Name _____ Date _____

**Additional Activity 4: Making Angles
and Triangles**

Work on your own.
You will need scissors, paper, a ruler, and a protractor.

> ➤ Fold a piece of paper as shown.
>   Unfold the paper. Cut the rectangle off the end to form a square.

>   Describe the triangles you see.
>   Find the measures of the sides and angles of the triangles.

> ➤ Fold the square to make the other diagonal.
>   Find the measures of the sides and angles of the triangles.
>   Name all the triangles you see.

> ➤ Fold your paper square into 4 along the diagonals.
>   This forms a right isosceles triangle.
>   Fold the triangle so the equal sides align.
>   Cut a piece from the fold line.
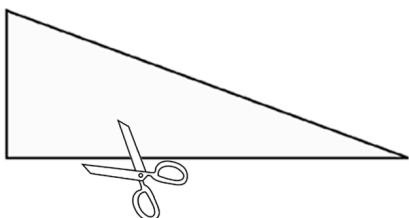
> ➤ Unfold the paper.
>   Describe the cut shapes you see.
>   How many are there? Why?

Take It Further:
How can you make a 90° angle by folding any scrap of paper?