▶ **ACTIVITY 6.1**

Developing Concepts

GROUP ACTIVITY
Work with a partner.

Classifying Shapes

▶ **QUESTION** Which shapes are polygons?

▶ **EXPLORING THE CONCEPT**

The symbols at the right are used in meteorology to represent different weather elements such as storms, precipitation, and cloud formations.

You can classify the shapes based on the tests below.

Test 1 Is the symbol made up of straight line segments only?

Test 2 Does each line segment in the symbol intersect exactly two other line segments, one at each endpoint?

WEATHER SYMBOLS
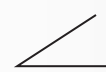
squall   lightning   cumulus cloud

snow   altostratus cloud   hail

showers   haze   tropical storm

▶ **DRAWING CONCLUSIONS**

1. Make a list of weather symbols that pass Test 1.

2. From your list in Exercise 1, which symbols pass Test 2?

3. A shape that passes both Test 1 and Test 2 is called a *polygon*. The following symbols are used to write flow charts for computer programs. Which symbols are polygons? Explain your reasoning.
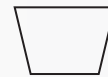
PROGRAMMING SYMBOLS

process   document   input/output   manual operation   collate

online storage   decision   extract   keying   connecter

4. **CRITICAL THINKING** What is the fewest number of sides a polygon can have? What is the greatest possible number of sides? Explain.