

Triangles & the Triangle Angle-Sum Theorem

Name: _____ Date: _____

LEARNING OBJECTIVE

The student will construct triangles and verify through measurement that the interior angles of any triangle always sum to 180 degrees.

MATERIALS NEEDED

- Ruler
- protractor
- paper
- pencil
- scissors

HANDS-ON ACTIVITY

1. Draw three different triangles on paper: one that looks equilateral (all sides similar length), one that looks like a right triangle, and one scalene (all different side lengths).
2. Using the protractor, measure all three interior angles of each triangle and record the measurements.
3. Add up the three angle measurements for each triangle and record the total.
4. Cut out one of the triangles, then tear or cut off its three corners (angles) and arrange the three corner points together, touching, on a flat line on another sheet of paper.
5. Observe and record what shape the three corners form when placed together.

QUESTIONS

1. What did the three angle measurements add up to for each of your triangles?

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2. When you arranged the three torn corners together, what shape or line did they form?

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3. A triangle has two angles measuring 50 degrees and 65 degrees. What must the third angle measure?
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4. Can a triangle have two obtuse angles (each greater than 90 degrees)? Use the 180-degree rule to explain why or why not.
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