

Pre Algebra • Lesson 15.1

Scale Drawings of Triangles, Part 1

Original Triangle

In the first part of this activity you will use a ruler and pasta to construct a triangle with given side lengths.

1. Use pasta to construct a triangle with side lengths of 3 cm, 4 cm, and 5 cm.
2. Trace the triangle on a piece of paper. Measure the side lengths to confirm. (Start over if necessary.) Label the side lengths on the *interior*.
3. Measure and label the angles.
4. Cut out your triangle. (Be precise!) Soon you'll compare this triangle cut-out with other triangles.

Second Triangle

In the second part of this activity you will use a ruler and pasta to construct a second triangle.

5. Use pasta to construct a triangle with side lengths of 6 cm, 8 cm, and 10 cm.
6. Trace the triangle on a piece of paper. Measure the side lengths to confirm. (Start over if necessary.) Label the side lengths on the *interior*.
7. Measure and label the angles.
8. Cut out your triangle. (Be precise!) Soon you'll compare this triangle cut-out with other triangles.

Third Triangle

In the third part of this activity you will use a ruler and pasta to construct a third triangle.

9. Use pasta to construct a triangle with side lengths of 9 cm, 12 cm, and 15 cm.
10. Trace the triangle on a piece of paper. Measure the side lengths to confirm. (Start over if necessary.) Label the side lengths on the *interior*.
11. Measure and label the angles.
12. Cut out your triangle. (Be precise!) Soon you'll compare this triangle cut-out with other triangles.

Notice

Answer the following questions by discussing with your group. Write your responses in the space provided.

13. What do you notice about the side lengths of the triangles?

14. What do you notice about the angle measures of the triangles? How could you confirm what you've noticed by using the triangle cut-outs?

15. What do you notice about the area of the triangles?

Wonder

16. On the back, describe what you're wondering about these *scale drawings* of triangles.