Answers and talk notes

Area of Regular Polygons

What your student is learning

Tonight we find the area of a regular polygon, like a hexagon (6 sides). We break it into equal triangles, find one triangle's area, then add them all up.

Answers

Ask your student to explain before you look.

1. **A.** All sides equal and all angles equal. All sides equal and all angles equal describes a regular polygon.
2. **B.** 8. 8 triangles: a regular polygon splits into one triangle for each side.
3. **D.** 60 square units. 60 square units: 6 × 10 = 60.
4. **C.** 6 square units. 6 square units: ½ × 4 × 3 = 6.
5. **A.** 75 square units. 75 square units: one triangle is ½ × 6 × 5 = 15, and 5 × 15 = 75.

Talk about it

How many triangles fit inside the hexagon?

Home mission

Draw a hexagon on paper. Draw lines from the middle to each corner. Count the triangles. If one triangle is 10 square units, how would you find the whole hexagon?

When they are stuck, ask

- How many sides does the shape have? That is how many triangles we make.
- Let's find one triangle first, then multiply by the number of sides.
- Did we multiply by the number of triangles, or did we stop at one?

Try not to say

- One triangle's area is the whole answer.
- Add the number of sides to the triangle's area.
- Just memorize the steps.