Answers and talk notes

Determine Surface Area of Pyramids

What your student is learning

Tonight we find the surface area of a pyramid. We add the area of the flat base plus the area of all the triangle sides that meet at a point on top.

Answers

Ask your student to explain before you look.

1. **C.** 4. A square pyramid has 4 triangular faces, one for each side of the square base.
2. **A.** 15 square units. 15 square units: ½ × 6 × 5 = 15.
3. **D.** 56 square units. 56 square units: 4 × 10 = 40, and 40 + 16 = 56.
4. **B.** The area of all the triangle faces. The area of all the triangle faces is added to the base area.
5. **C.** 48 square units. 48 square units: one face is ½ × 6 × 4 = 12, and 4 × 12 = 48.

Talk about it

Does the pyramid have a face on the bottom too?

Home mission

Fold a paper pyramid: draw a square and a triangle on each side of it. Count the faces. Ask: is the square part of the outside? Would you wrap it?

When they are stuck, ask

- What is the base area? Let's find it first.
- How many triangle sides are there? Did we add the base too?
- Which number is the slant height for the triangles?

Try not to say

- Just add the four triangles and you're done.
- Forget the ½ — just multiply base times slant height.
- Use the pyramid's straight-up height for the triangle sides.