

Lesson 5-6

Reinforce Understanding

Represent Three-Dimensional Figures in Two Dimensions

I can find the surface area of a solid by using its net.

Worked model

A triangular prism has 2 triangle bases and 3 rectangular side faces. Draw and describe its net.

1. List the attributes. bases: 2 triangles side faces: 3 rectangles
2. Draw the 3 rectangles in a row — these wrap around the outside.
3. Attach 1 triangle to the top edge of the row and 1 to the bottom edge.
4. Check: five flat pieces, and every folding edge has a partner.

Answer: The net is a row of 3 rectangles with a triangle on the top edge and one on the bottom.

Practice

Complete each exercise. Show the reasoning that supports your answer.

1. Match each concept about rectangular prisms.

Write the letter of the matching item on each line.

1. _____ Top & Bottom faces
2. _____ Front & Back faces
3. _____ Left & Right faces
4. _____ Surface area formula
5. _____ Volume formula
6. _____ Number of faces

- $Al \times w$ (two of them)
- $Bl \times h$ (two of them)
- $Cw \times h$ (two of them)
- $DSA = 2lw + 2lh + 2wh$
- $EV = l \times w \times h$
- F6 faces total

2. Put these steps in order for finding the surface area of a $5 \times 3 \times 2$ box.

Write the name of the correct group on each line.

Groups:

- _____ Identify the three face pairs: 5×3 , 5×2 , 3×2
- _____ Find area of each: 15, 10, 6
- _____ Multiply each by 2: 30, 20, 12
- _____ Add all pairs: $30 + 20 + 12$
- _____ $SA = 62 \text{ in}^2$