Nets & Surface Area

Geometry & Shapes • Answer Key

ANSWER KEY • Amplify Alignment: Grade 6 Accelerated, Unit 1, Lesson 10

1. Select all the units that can be used to describe surface area.

- [x] **A.** Square inches
- [ ] **B.** Feet
- [ ] **C.** Centimeters
- [ ] **D.** Cubic meters
- [x] **E.** Square yards
- [ ] **F.** Cubic inches

2. Select all the units that can be used to describe volume.

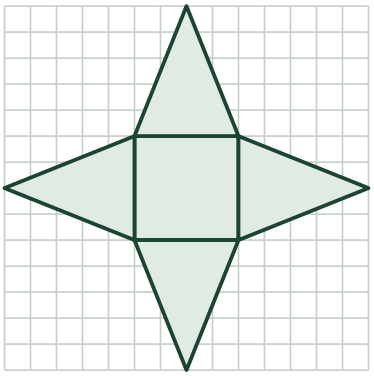
- [ ] **A.** Square inches
- [ ] **B.** Feet
- [ ] **C.** Centimeters
- [x] **D.** Cubic meters
- [ ] **E.** Square yards
- [x] **F.** Cubic inches

3. What is the difference between the units used to measure surface area and the units used to measure volume? Look back at Problems 1–2 if it is helpful.

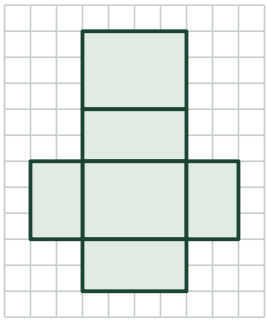
Surface area is measured in square units (like square inches) because it covers flat faces. Volume is measured in cubic units (like cubic meters) because it fills space.

4. Here is a net. Each square on the grid has an area of 1 square unit. Determine the surface area of the polyhedron that could be created using this net.

The square base is $4 \times 4 = 16$. Each triangle is $\frac{1}{2} \cdot 4 \cdot 5 = 10$, and $4 \times 10 = 40$. $16 + 40 = 56$ square units

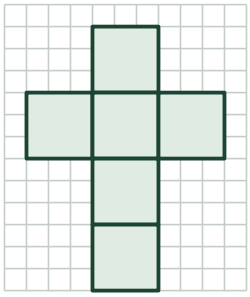


5. Determine the surface area of the rectangular prism that could be created from this net. Each square on the grid has an area of 1 square unit.



Two 4 × 3 faces (24), two 4 × 2 faces (16), and two 2 × 3 faces (12). 24 + 16 + 12 = 52 square units

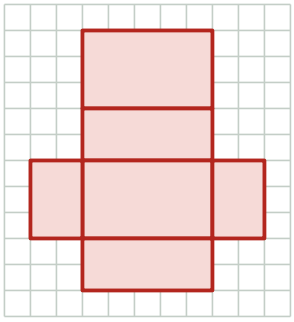
6. Determine the surface area of the cube that would be formed by this net. Each square on the grid has an area of 1 square unit. Show or explain your thinking.



Each face is 3 × 3 = 9 square units. A cube has 6 faces: 6 × 9 = 54 square units

7. Here is a rectangular prism that is 5 cm long, 3 cm wide, and 2 cm tall.

a Use the grid to draw a net for the prism. The side of one grid square is 1 centimeter.





5 cm long • 3 cm wide • 2 cm tall

b Determine the surface area of the prism. **2(15) + 2(10) + 2(6) = 62 sq. cm**