

Grade 6 - Nets and Surface Area - Quiz

Common Core 6.G.A.4 · maths-pdf.fr/en/

Name: _____ Class: _____ Date: ____/____/____

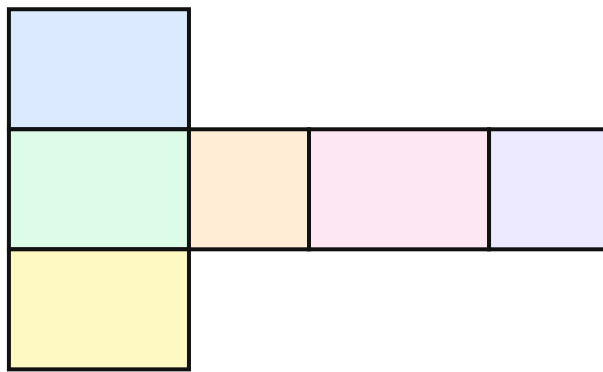
This quiz has 10 multiple-choice questions on nets and surface area of prisms and pyramids (Common Core 6.G.A.4). Choose one answer for each and read the explanation to learn from each mistake.

Grade 6 · Common Core State Standards: **6.G.A.4**

Questions

Question 1

How many faces does a net of a rectangular prism have?



A net.

- A. 4
- B. 5
- C. 8
- D. 6

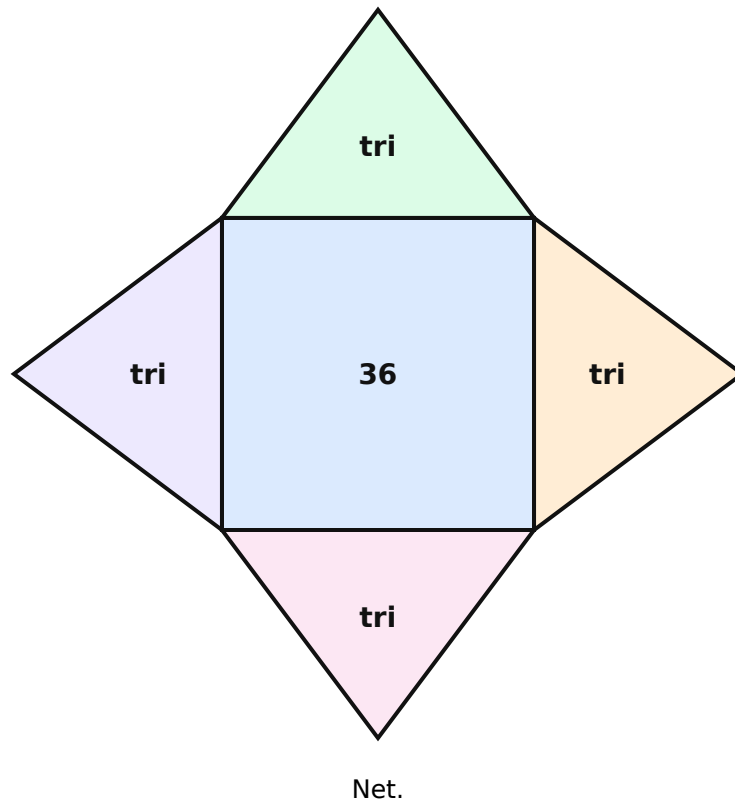
Question 2

One face of a cube has an area of 49 square inches. What is the surface area of the whole cube?

- A. 196 square inches
- B. 294 square inches
- C. 49 square inches
- D. 343 square inches

Question 3

A square pyramid has base 6 and triangular faces with base 6 and height 4. What is the surface area?



- A. 84
- B. 60
- C. 48
- D. 120

Question 4

What is the surface area of a 2 by 3 by 4 prism?

- A. 24
- B. 52
- C. 26
- D. 48

Question 5

Which solid has a net made of 4 triangles and 1 square?

- A. A cube
- B. A square pyramid
- C. A triangular prism
- D. A rectangular prism

Question 6

A cube has a surface area of 96. What is its edge length?

- A. 16
- B. 6
- C. 4
- D. 8

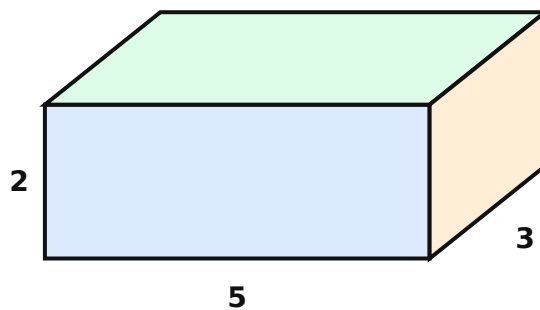
Question 7

A triangular prism has two triangles of area 6 each and rectangles totaling 60. What is its surface area?

- A. 66
- B. 60
- C. 72
- D. 36

Question 8

A box with no top is 5 by 3 by 2. What is the area of material?



Box.

- A. 47
- B. 62
- C. 94
- D. 30

Question 9

Why is surface area measured in square units?

- A. It is the area of flat faces
- B. It counts cubes inside
- C. It measures length
- D. It is a volume

Question 10

Two boxes: 4 by 4 by 4 and 2 by 4 by 8. Which has more surface area?

- A. The cube (96 vs 112)
- B. They are equal
- C. Cannot tell
- D. The 2 by 4 by 8 box (112 vs 96)

Answers

1. **D** - A rectangular prism has 6 faces.
2. **B** - A cube has 6 equal faces, so $6 \times 49 = 294$. Using 4 faces gives 196, and 343 is the volume.
3. **A** - $36 + 4 \times (1/2 \times 6 \times 4) = 36 + 48 = 84$.
4. **B** - $2(6 + 8 + 12) = 52$.
5. **B** - The square is the base and the triangles are the sides.
6. **C** - $96 \div 6 = 16$ and the edge is the square root of 16, which is 4.
7. **C** - $2 \times 6 + 60 = 72$.
8. **A** - Full surface area is 62; remove the top (15): 47.
9. **A** - Surface area adds the areas of faces.
10. **D** - $2(8 + 16 + 32) = 112$ and $6 \times 16 = 96$.

Remember

- A net shows all faces of a solid laid flat.
- Surface area is the total area of all faces, in square units.
- Rectangular prism: $SA = 2(lw + lh + wh)$.
- Pyramid: base area plus the areas of the triangular faces.
- Triangular prism: two triangles plus three rectangles.