

Grade 6 - Area of Triangles and Polygons - Quiz

Common Core 6.G.A.1 · maths-pdf.fr/en/

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

This quiz has 10 multiple-choice questions on area of triangles, parallelograms, trapezoids, and composite polygons (Common Core 6.G.A.1). Pick one answer for each and read the explanation.

Grade 6 · Common Core State Standards: **6.G.A.1**

Questions

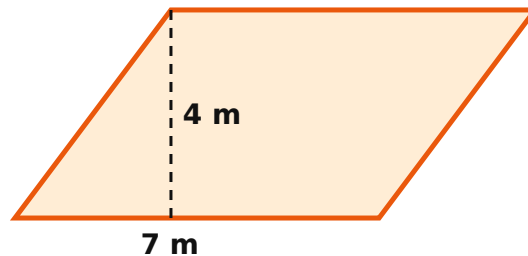
Question 1

What is the area of a triangle with base 8 cm and height 5 cm?

- A. 40 cm^2
- B. 20 cm^2
- C. 13 cm^2
- D. 26 cm^2

Question 2

What is the area of this parallelogram?



Parallelogram.

- A. 14 m^2
- B. 28 m^2
- C. 11 m^2
- D. 35 m^2

Question 3

A triangle has area 24 and height 6. What is the base?

- A. 4
- B. 12
- C. 144
- D. 8

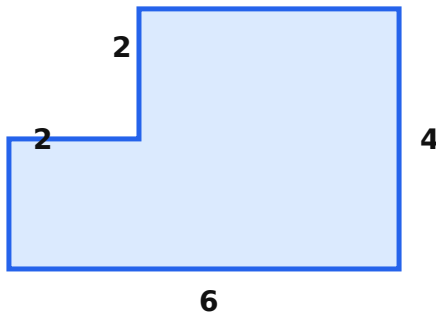
Question 4

What is the area of a trapezoid with bases 6 and 10 and height 4?

- A. 64
- B. 40
- C. 32
- D. 24

Question 5

What is the area of this shape?



L-shape.

- A. 24
- B. 28
- C. 20
- D. 16

Question 6

A triangle and a parallelogram have the same base 10 and the same height 6. How do their areas compare?

- A. The triangle has twice the area
- B. The triangle has half the area
- C. They have the same area
- D. The triangle has one third of the area

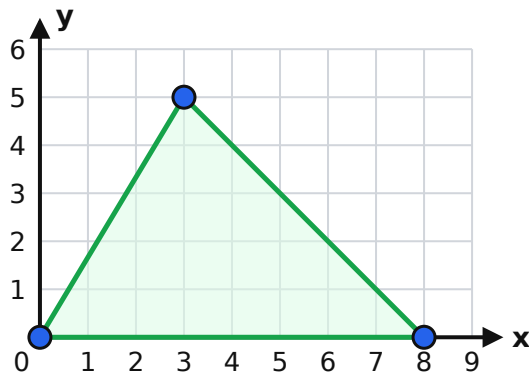
Question 7

A triangle has base 9 and height 4. Another triangle has base 6 and height 6. Which has the greater area?

- A. They have the same area
- B. The first triangle
- C. The second triangle
- D. Cannot be determined

Question 8

What is the area of a triangle with vertices $(0, 0)$, $(8, 0)$, and $(3, 5)$ on a coordinate plane?



Triangle.

- A. 20
- B. 40
- C. 15
- D. 24

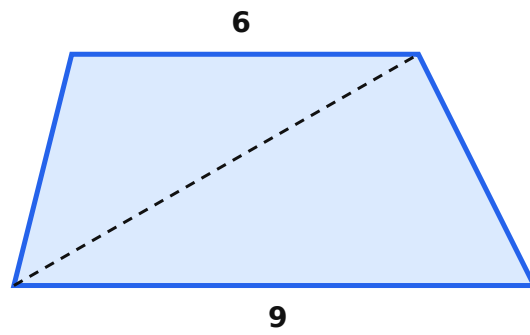
Question 9

A rectangle 10 m by 6 m has a triangle with base 10 m and height 3 m on top. What is the total area?

- A. 60 m^2
- B. 90 m^2
- C. 15 m^2
- D. 75 m^2

Question 10

A trapezoid is split into two triangles by a diagonal. The triangles have areas 18 and 12. What is the area of the trapezoid?



Trapezoid.

- A. 30
- B. 6
- C. 216
- D. 15

Answers

1. **B** - Half of 8×5 is 20. Forgetting the half gives 40.
2. **B** - Area = base $\times$ height = $7 \times 4 = 28$. The slanted side length is not used.
3. **D** - $24 = (1/2) \times b \times 6 = 3b$, so $b = 8$.
4. **C** - $(6+10) / 2 \times 4 = 32$.
5. **C** - $6 \times 4 - 2 \times 2 = 24 - 4 = 20$.
6. **B** - The parallelogram has area 60 and the triangle has area $(1/2)(10)(6) = 30$.
7. **A** - $(1/2)(9)(4) = 18$ and $(1/2)(6)(6) = 18$.
8. **A** - Base 8 and height 5: $(1/2)(8)(5) = 20$.
9. **D** - $60 + (1/2)(10)(3) = 60 + 15 = 75$.
10. **A** - $18 + 12 = 30$. The areas add.

Remember

- Rectangle and parallelogram: $A = bh$.
- Triangle: $A = (1/2)bh$.
- Trapezoid: split into two triangles, or use $A = (1/2)(b_1 + b_2)h$.
- The height is perpendicular to the base, not the slanted side.
- Area is measured in square units.