Area and Perimeter (Rectangles and Triangles)

This worksheet focuses on calculating the area and perimeter of rectangles and triangles. Remember to include units in your final answers.

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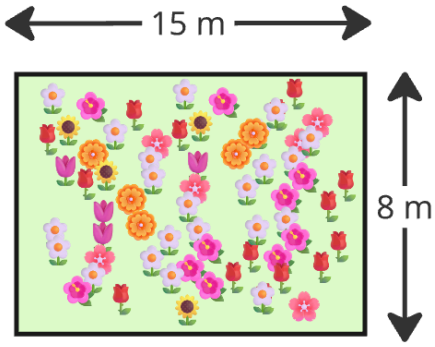
1. A rectangular garden measures $15\ \text{m}$ in length and $8\ \text{m}$ in width. Calculate:

a. Its perimeter.

b. Its area.



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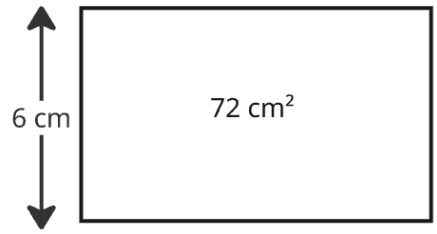
2. A square tile has a side length of $25\ \text{cm}$. Calculate:

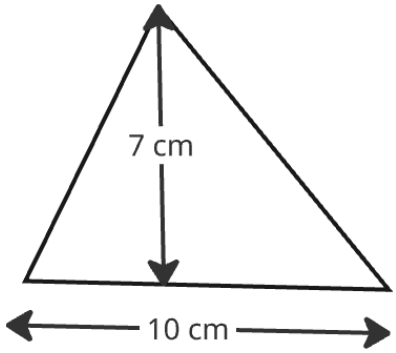
a. The length of its perimeter.

b. The area of the tile in cm^2.

3. A rectangle has an area of $72\ \text{cm}^2$ and a width of $6\ \text{cm}$. Find its length and perimeter.

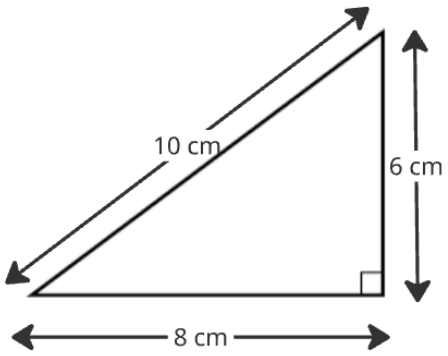


4. A triangle has a base of $10\ \text{cm}$ and a perpendicular height of $7\ \text{cm}$. Calculate its area.



5. The area of a triangle is $45\ \text{m}^2$. If the base is $9\ \text{m}$, what is its perpendicular height?

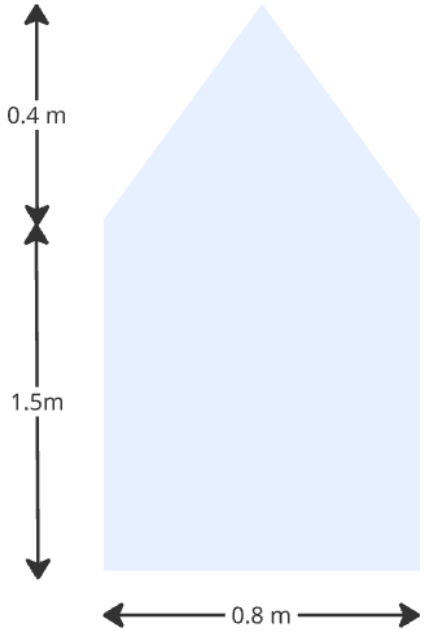
6. Find the area and perimeter of the right-angled triangle shown below.



(Diagram shows a right-angled triangle with two shorter sides of length $6\ \text{m}$ *and* $8\ \text{m}$*.)*

7. A square field has an area of $225\ \text{m}^2$. How much fencing would be needed to enclose the field? If the fence costs $\$15.50$ per metre, what is the total cost?

8. A window is in the shape of a composite figure made of a rectangle and a triangle. The rectangle is $1.5\ \mathrm{m}$ high and $0.8\ \mathrm{m}$ wide. The triangle sits on top of the rectangle, sharing the $0.8\ \mathrm{m}$ width, and has a perpendicular height of $0.4\ \mathrm{m}$. Calculate the total area of the glass required for the window.

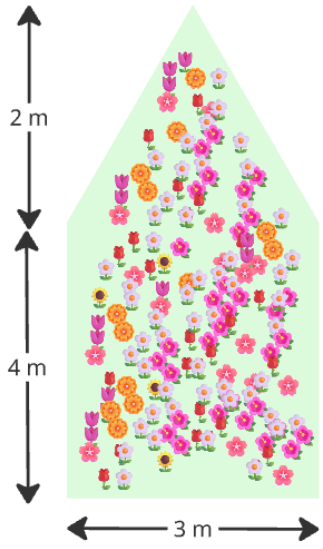


9. A triangular sail has an area of $12\ \text{m}^2$. If the base of the sail is $5\ \text{m}$ long, what is the height of the sail? If the perimeter of the sail is $18\ \text{m}$, what are the lengths of the two remaining sides?

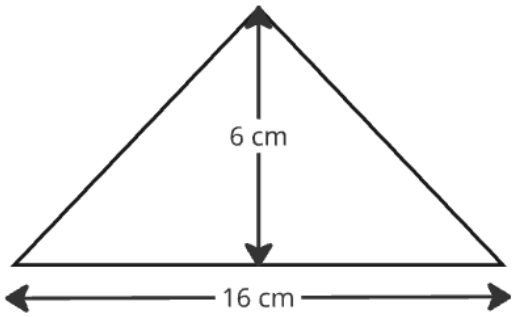
10. A triangular field has a base of $150\ \text{m}$ and a height of $80\ \text{m}$. If grass seed costs $\$3.50$ per square metre, what is the total cost of seeding the field?

11. A swimming pool is $20\ \text{m}$ long, $10\ \text{m}$ wide, and has a uniform depth of $2\ \text{m}$. The floor and four side walls need to be tiled. Calculate the total area to be tiled.
(Hint: Draw a net of the five surfaces that need tiling.)

12. A garden is made up of a rectangle $(4\ \text{m} \times 3\ \text{m})$ attached to a triangle. The base of the triangle is $3\ \text{m}$ and its height is $2\ \text{m}$. Find the total area of the garden.



13. Find the perimeter of the isosceles triangle shown below. Its base is $16\ \text{cm}$, and its perpendicular height is $6\ \text{cm}$.



(Hint: Draw the perpendicular height to split it into two right-angled triangles.)

14. A rectangular field is $12\ \text{m}$ long. The diagonal distance across the field is $15\ \text{m}$.

a. Find the width of the field.

b. Calculate the area of the field.