



Grade 8 - Mathematics

Measurement 4

Memo



1. Calculate the area of a square with a side of 12,5cm.

$$\begin{aligned} A &= s \times s \\ &= 12,5\text{cm} \times 12,5\text{cm} \\ &= 156,25\text{cm}^2 \end{aligned}$$

2. Calculate the area of a rectangle with sides of 1,7m and 2,3m.

$$\begin{aligned} A &= L \times B \\ &= 1,7\text{m} \times 2,3\text{m} \\ &= 3,91\text{m}^2 \end{aligned}$$

3. Calculate the area of a triangle with a height of 6mm and a base of 8mm.

$$\begin{aligned} A &= \frac{1}{2}b \times h \\ &= \frac{1}{2} \times 8\text{mm} \times 6\text{mm} \\ &= 24\text{mm}^2 \end{aligned}$$

4. Calculate the length of the side of a square which has an area of 625mm².

$$\begin{aligned} A &= s^2 \\ 625\text{mm}^2 &= s^2 \\ \sqrt{625\text{mm}^2} &= s \\ 25,07\text{mm} &= s \end{aligned}$$

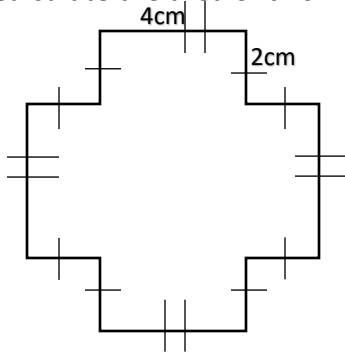


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5. Calculate the height of a triangle if the area is 6cm^2 and the base is 18mm .

$$\begin{aligned}A &= \frac{1}{2}b \times h \\6\text{cm}^2 &= \frac{1}{2} \times 40\text{mm} \times h \\6\text{cm}^2 &= \frac{1}{2} \times 4\text{cm} \times h \\6\text{cm}^2 &= 4\text{cm} \times h \\6\text{cm}^2 \div 4\text{cm} &= h \\1,5\text{cm} &= h\end{aligned}$$

6. Calculate the area of this irregular polygon:



$$\begin{aligned}A &= 4 \times \text{outer rectangles} + 1 \times \text{inner square} \\&= 4(4\text{cm} \times 2\text{cm}) + (4\text{cm} \times 4\text{cm}) \\&= 4(8\text{cm}^2) + 16\text{cm}^2 \\&= 32\text{cm}^2 + 16\text{cm}^2 \\&= 48\text{cm}^2\end{aligned}$$

7. A square tile has a side length of 14cm . The length of a rectangle of equal area is 16cm . Find its width.

$$\begin{aligned}\text{A of square tile:} \\A &= s \times s \\&= 14\text{cm} \times 14\text{cm} \\&= 196\text{cm}^2 \\ \\ \text{Width of rectangle:} \\A &= L \times W \\196\text{cm}^2 &= 16\text{cm} \times W \\196\text{cm}^2 \div 16\text{cm} &= W \\12,25\text{cm} &= W\end{aligned}$$



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