Area of triangles and quadrilaterals

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A sample from this topic. The complete topic collection contains three different resources and worked solutions.

Read the explanation and worked example. Show your working; use a calculator only where asked.

What you will practise

• Use perpendicular heights to find areas of rectangles, triangles and parallelograms.

• Explain a method and check the reasonableness of a result.

Useful starting skills: Use the prerequisite operations and representations shown in the worked example.

Area measures the surface enclosed. A rectangle has area length × width. A parallelogram can be rearranged into a rectangle with the same base and perpendicular height.

A triangle occupies half of a matching parallelogram: $A=bh/2$. The height is perpendicular to the chosen base and may be drawn outside an obtuse triangle.

Worked example

A triangle has base 14 cm and perpendicular height 9 cm. Find its area.

$A=bh/2$.

$14 \times 9 /2=63$.

Answer: 63 cm²

Try it yourself

Name: _____ Date: _____

1. Find the area of a rectangle 8 cm by 13 cm.

2. Find the area of a triangle with base 11 m and height 6 m.

Answers and explanations

Check the method as well as the final answer. An alternative correct method is also valid.

1. 104 cm²

Multiply the perpendicular sides.

2. 33 m²

Half the base-height product.

Curriculum reference: VC2M7M01

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