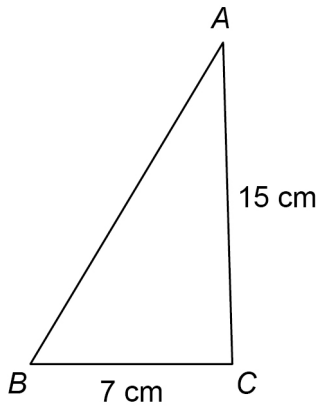
1 Here is triangle *ABC*.



Not drawn accurately

1 (a) Assume that angle $ACB = 90°$

Work out the length *AB*.

[3 marks]

$AB^2 = 15^2 + 7^2$ (1)

$= 225 + 49$

$= 274$

$AB = \sqrt{274}$ (1)

$= 16.55...$

(1)

Answer 16.55 ... cm

1 (b) The actual length *AB* is greater than the answer to part (a).

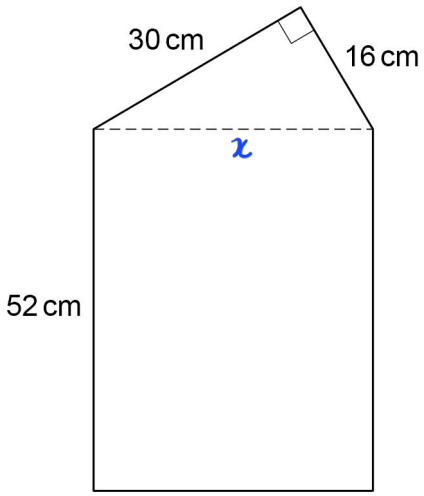
What does this mean about angle *ACB*?

Tick **one** box.

[1 mark]

- ☐ It is 90°
- ☐ It is less than 90°
- ☑ It is more than 90° (1)
- ☐ It could be any of the above.

2 A shape is made by joining a right-angled triangle to a rectangle.



Not drawn accurately

Work out the area of the shape.

[5 marks]

$x^2 = 30^2 + 16^2$

$= 900 + 256$ (1)

$= 1156$

$x = \sqrt{1156} = 34$ (1)

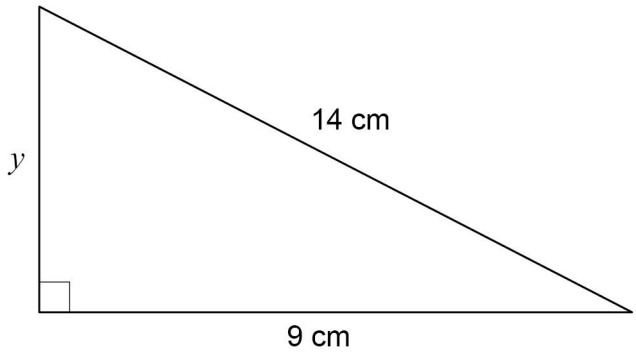
Area of triangle : $\frac{1}{2} \times 30 \times 16 = 240$ (1)

Area of rectangle : $52 \times 34 = 1768$ (1)

Total : $240 + 1768 = 2008$ (1)

Answer 2008 cm^2

3 Here is a triangle.



Not drawn accurately

Use Pythagoras' theorem to work out the value of y.

Give your answer as a decimal.

[3 marks]

$y^2 = 14^2 - 9^2$

$= 196 - 81$

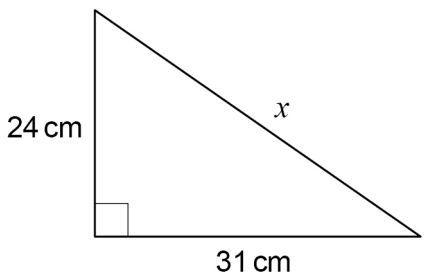
$= 115$ (1)

$y = \sqrt{115}$ (1)

$= 10.72$ (1)

$y =$ 10.72 cm

4



Not drawn accurately

Use Pythagoras' theorem to work out the value of x.

Give your answer as a decimal.

[3 marks]

$x^2 = 24^2 + 31^2$ ✓ (1)

$x = \sqrt{24^2 + 31^2}$ ✓ (1)

$= \sqrt{1537}$

$= 39.2$ ✓ (1)

Answer 39.2 cm