

Name:

Level 2 Further Maths

Surds



Corbettmaths

Ensure you have: Pencil or pen

### Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Revision for this topic

[www.corbettmaths.com/more/further-maths/](http://www.corbettmaths.com/more/further-maths/)



1. Simplify  $\sqrt{300} - 2\sqrt{27}$

.....  
**(2)**

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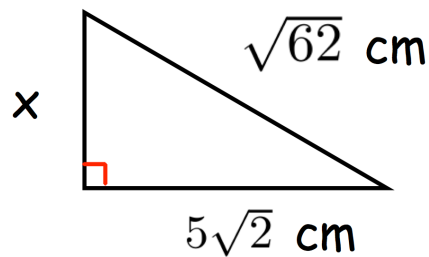
2. Expand and simplify fully  $(3 + 4\sqrt{3})(5 - \sqrt{3})$

.....  
**(2)**

3. Expand and simplify  $(3\sqrt{2} - 1)^3$

.....  
(4)

4. Shown below is a right angled triangle.



Find the length of the side labelled x.

Give your answer in the form  $a\sqrt{b}$

.....cm  
(4)

5. Solve  $\sqrt{200} + \sqrt{18} = \sqrt{y} + \sqrt{98}$

$y = \dots\dots\dots$   
**(3)**

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6. Work out the value of  $y$  such that  $\frac{\sqrt{15} \times \sqrt{y}}{\sqrt{5}} = 3\sqrt{11}$

$y = \dots\dots\dots$   
**(4)**

7. Solve  $\sqrt{112} + y\sqrt{28} = 5\sqrt{7}$

$y = \dots\dots\dots$   
**(4)**

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8. Simplify this ratio fully

$$\sqrt{20} : \sqrt{45} : \sqrt{180}$$

$\dots\dots\dots$   
**(3)**