

Name: _____

Level 2 Further Maths

Equations involving
Indices/Roots



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/



1. Solve $\sqrt[3]{8x - 1} = 5$

.....
(2)

2. Solve $\frac{3}{4}\sqrt{x} = 2$

.....
(2)

3. Solve $x^{-2} = 49$

.....
(2)

4. Solve $\sqrt{(10 + \sqrt{x})} = 16$

.....
(2)

5. Solve $(2 + \sqrt{y})^{\frac{1}{4}} = 3$

.....
(3)

6. Solve $x^{\frac{2}{3}} = 2\frac{7}{9}$

.....
(3)

7. Solve $x^{\frac{3}{2}} = \frac{64}{729}$

.....
(3)

8. Solve $x^{-\frac{1}{2}} = 2\frac{1}{4}$

.....
(3)

9. Solve $x^{-0.25} = 0.1$

.....
(3)

10. Solve $\frac{24}{\sqrt[4]{x}} = 3$

.....
(2)

11. Solve $4x^{\frac{1}{3}} + 5 = 0$

.....
(3)

12. Solve $\sqrt{100 - \sqrt[3]{x}} = 6$

.....
(3)

13. Solve $\sqrt[3]{(42 - 3\sqrt{x})} = 3$

.....
(4)

14. Solve $4^{3x+1} \times 32^{1.2x} = 16^{11-x}$

.....
(5)

15. Solve $81^3 + 81^3 + 81^3 + 81^3 + 81^3 + 81^3 + 81^3 + 81^3 + 81^3 = 3^x$

.....
(3)

16. Solve $2^x + 1 = \sqrt{3(1 - 2^{x-1})}$

.....
(5)