Level 2 Further Maths

Equations involving Indices/Roots

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

3. Solve \( x^{-2} = 49 \)
4. Solve \( \sqrt{10 + x} = 16 \)

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

6. Solve \( x^{\frac{2}{3}} = 2 \frac{7}{9} \)
7. Solve \( x^{\frac{3}{2}} = \frac{64}{729} \)

8. Solve \( x^{-\frac{1}{2}} = 2 \times \frac{1}{4} \)

9. Solve \( x^{-0.25} = 0.1 \)
10. Solve \( \frac{24}{\sqrt[4]{x}} = 3 \)

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

12. Solve \( \sqrt{\left(100 - \sqrt[3]{x}\right)} = 6 \)
13. Solve $\sqrt[3]{(42 - 3\sqrt{x})} = 3$

14. Solve $4^{3x+1} \times 32^{1.2x} = 16^{11-x}$
15. Solve \( 81^3 + 81^3 + 81^3 + 81^3 + 81^3 + 81^3 + 81^3 + 81^3 \times 81^3 = 3^x \)

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