

Indices More examples

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|---|---|---|
| <p>1 Express in Simplest Form</p> $\frac{1}{2^{-1} + 1}$ | <p>2 Express in Simplest Form</p> $\frac{3^{-1}}{3^{-1} - 4^{-1}}$ | <p>3 Solve the equation</p> $9^x - 12 \times 3^x + 27 = 0$ |
| <p>4 Find the value of x if $64^{1-x} = 128^{-x}$</p> | <p>5 Expand $(x^{\frac{1}{2}} + y)^2$</p> | <p>6 Solve for s and y given :</p> $27^x = 81^y \quad \text{and} \quad 64^{x+y} = 128$ |
| <p>7 Simplify :</p> $\frac{81^{n-1} \times 8^m \times 3^{n+4}}{27^n \times 4^m \times (3^n)^2 \times 2^m}$ | <p>8 Solve for x</p> $(\sqrt{x})^2 - 2\sqrt{x} + 1 = 0$ $3^{2x} - 2(3^x) + 1 = 0$ | <p>9 Factorise and evaluate</p> $\frac{2^n + 2^{n-1}}{2^{n+1} + 2^n}$ |
| <p>10 Simplify</p> $\frac{\sqrt{8x^3 y^{-2} z^2}}{2x^{-3} y^2 z^{-2}} \div \left(\frac{3x^0 y^{-1} z^{-1}}{2x^{-2} y^{-2} z^2} \right)^{-2}$ | <p>11 Solve</p> $8^{1-x} = \frac{1}{16^x}$ | <p>12 Solve</p> <p>Solve for a and b if the following hold true:</p> $3^{a-b} = \frac{1}{9} \quad \text{and}$ $2^{b-3a} = \sqrt{4^a}$ |