

No Calculators!

The Laws of Indices

$$1 \quad x^m \times x^n = x^{m+n}$$

$$2 \quad x^m \div x^n = \frac{x^m}{x^n} = x^{m-n}$$

$$3 \quad (x^m)^n = x^{mn} = (x^n)^m$$

$$4 \quad x^{\frac{1}{n}} = \sqrt[n]{x}$$

$$5 \quad x^{-n} = \frac{1}{x^n} = \left(\frac{1}{x}\right)^n$$

Also...

 $x^0 =$

 $x^1 =$

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○ $x^0 = 1$

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$$(3^8)^{\frac{1}{4}} = 3^{8 \times \frac{1}{4}} = 3^2 = 9$$

Example 4: Find $\left(\frac{49}{81}\right)^{\frac{1}{2}}$

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Example 5: Find $(0.027)^{\frac{1}{3}}$

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