Indices and Surds

Multiplying with indices

To multiply indices you add the powers $a^{2} x a^{3} = (a x a) x (a x a x a) = a^{2} a^{3} = a^{5}$

Dividing with indices

To divide indices you subtract the powers $a^{5} \div a^{3} = (a \times a \times a \times a \times a) \div (a \times a \times a) = a^{5-3} = a^{2}$

Power raised to a power

When a power is raised to a power you multiply the powers $(a^3)^5 = a^{3 \times 5} = a^{15}$

Fractional powers

In a fractional powers $a^{1/3} = {}_{3}\sqrt{a}$ Negative powers A negative power means the point point of the printer $a^{-2} = \frac{1}{2}$

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Fractional and negative powers

When the power is both negative and a fraction the fractional power is dealt with first and then put to the reciprocal.

a⁻⅓ =<u>1</u> ₃Va

Zero powers

If the power of the number is 0 then it equals 1 a^o= 1