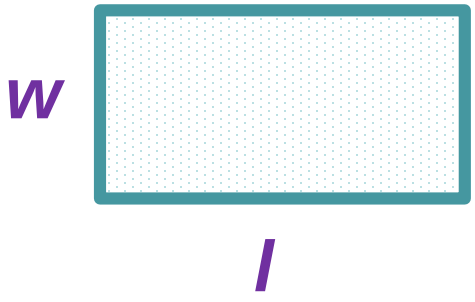
Area

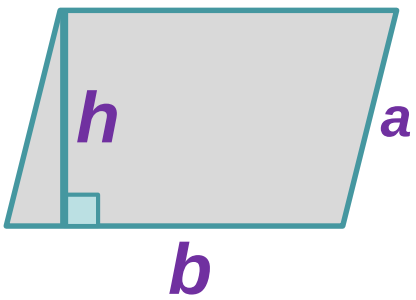
Rectangle

$l \times w$



Parallelogram

$b \times h$



Area

Remember

$$x + x = 2x$$

$$x \times x = x^2$$

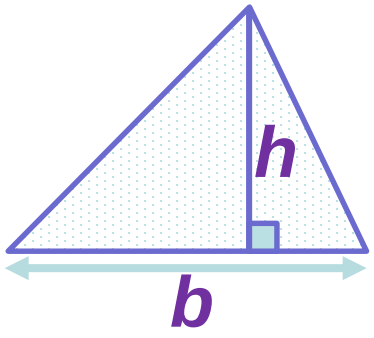
Indices

$$x^a \times x^b = x^{a+b}$$

e.g. $x^6 \times x^2 = x^8$

Area

TRIANGLE

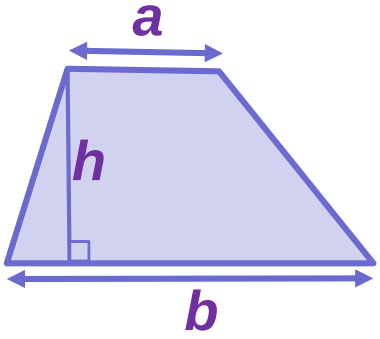


$$\frac{1}{2} b \times h$$

Area

TRAPEZIUM

$$\frac{1}{2}(a + b)h$$



Remember

$$x^0 = 1$$

Anything to the power of zero = 1

Indices

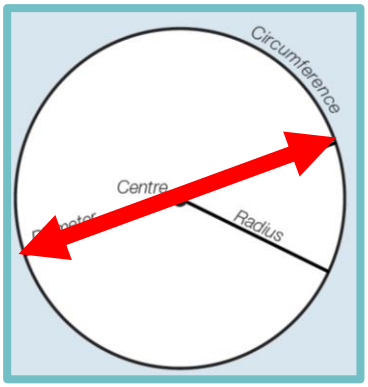
$$x^a \div x^b = x^{a-b}$$

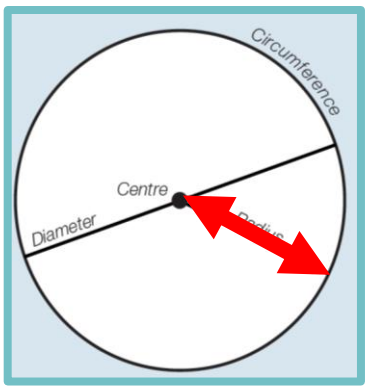
e.g. $x^6 \div x^2 = x^4$

Circumference =

$\pi \times$ *diameter*

Circles





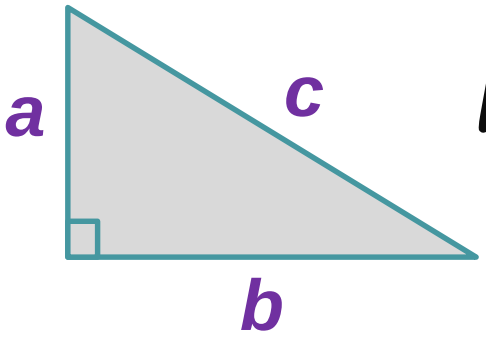
Area

$\pi \times$ *radius*^{2}

Circles

For right-angled triangles

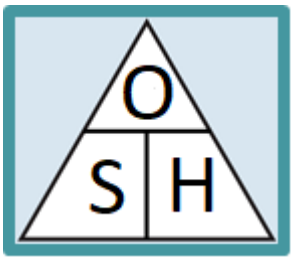
$$a^2 + b^2 = c^2$$

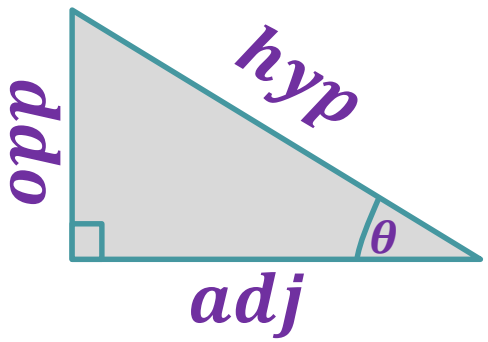


Pythagoras

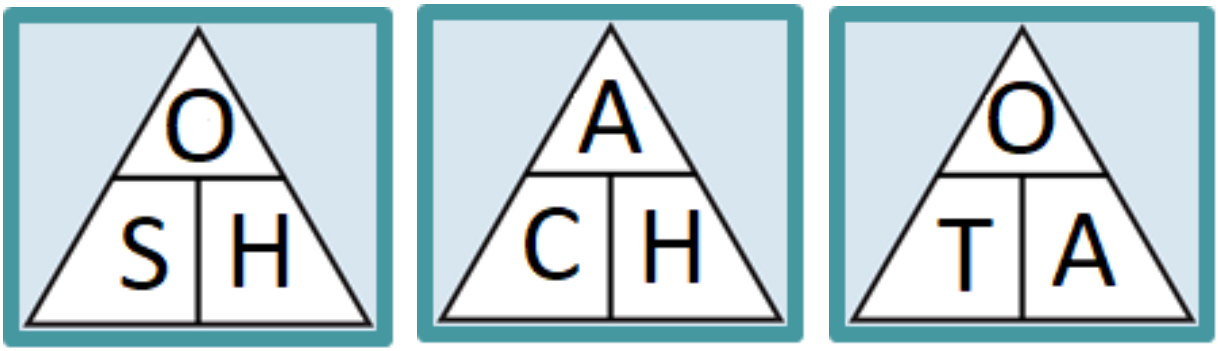
Trigonometry

$$Sin\ \theta = \frac{opp}{hyp}$$





Trigonometry



Some old horses can always hear their owners approach

Quadratic Formula

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Sine Rule

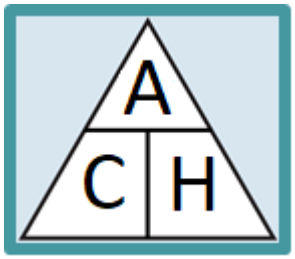
$$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$$

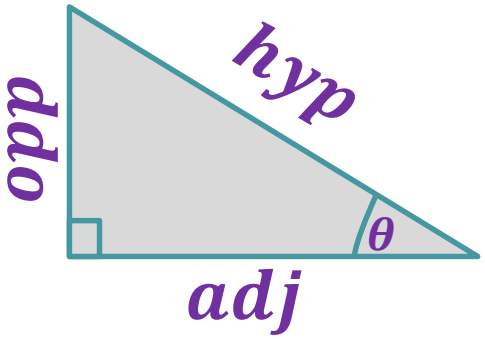
Sine Rule

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

Trigonometry

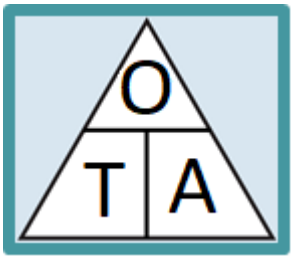
$$\cos\theta = \frac{adj}{hyp}$$

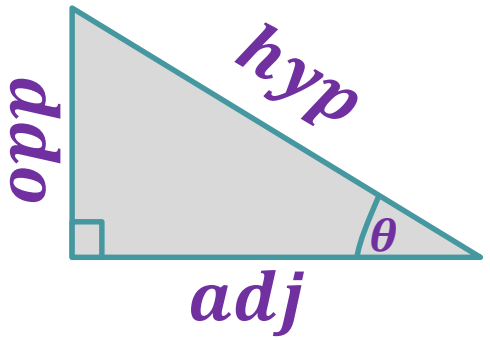




Trigonometry

$$\tan\theta = \frac{opp}{adj}$$





Cosine Rule

$$a^2 = b^2 + c^2 - 2bc\,CosA$$

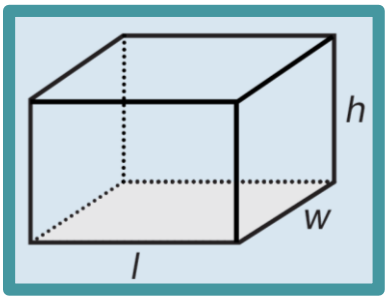
Cosine Rule

$$Cos\,A = \frac{b^2 + c^2 - a^2}{2bc}$$

Volume

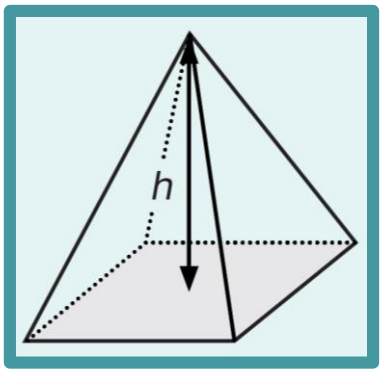
Cuboid

$l \times w \times h$



Volume

Pyramid



$\frac{1}{3}$ *area of base* x h

The mode appears most often in a set of numbers

e.g. 6, 3, 9, 6, 6, 5, 9, 3

Mode is 6.

Averages

Indices

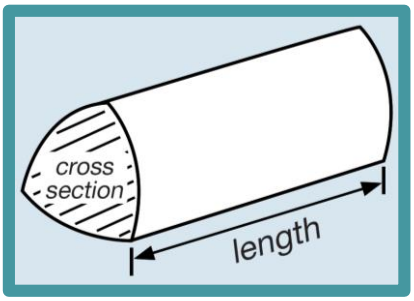
$$(x^a)^b = x^{a \times b}$$

e.g. $(x^6)^2 = x^{12}$

PRISM

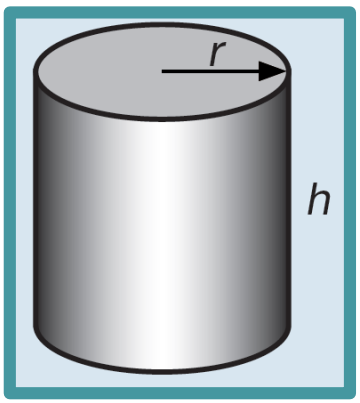
$$area\ of\ cross\ section \times length$$

Volume



Volume

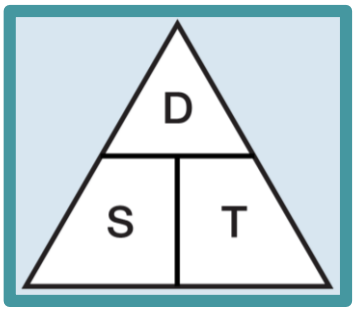
CYLINDER



$$= \pi r^2 h$$

Speed

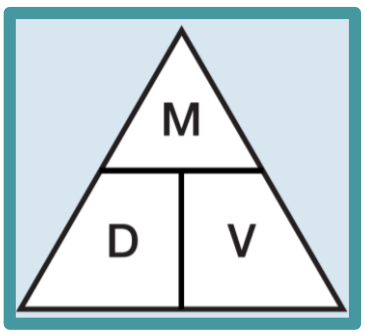
$$\text{Speed} = \frac{distance}{time}$$



Speed

Density

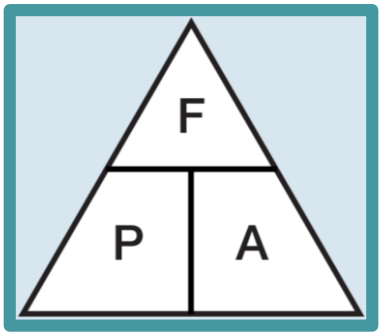
$$\text{Density} = \frac{mass}{volume}$$



Density

Pressure

$$\text{Pressure} = \frac{force}{area}$$



Pressure

The **median** is the middle number (SORT THEM FIRST)

e.g. 3, 5, 6, 6, 7, 9, 9,

Median is 6.

Averages

$\sin 0^o = 0$ $\sin 90^o = 1$

$\cos 0^o = 1$ $\cos 90^o = 0$

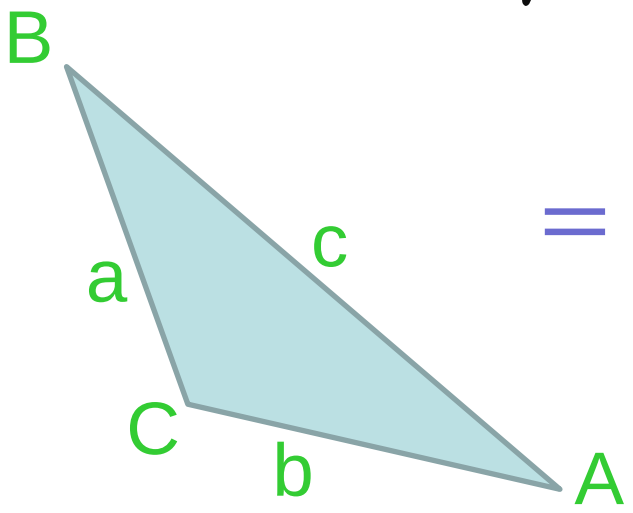
$\tan 0^o = 0$ $\tan 90^o = undefined$

Exact "Trig" Values

	30^o	45^o	60^o
sin	$\frac{1}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$
cos	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$
tan	$\frac{\sqrt{3}}{3}$	1	$\sqrt{3}$

Exact "Trig" Values

Area of a triangle



$$= \frac{1}{2}\, a\, b\, Sin\, C$$