circumference FORMULAE you need to kr SCHOOL & SPORTS COLLEGE

Area

Rectangle – Length x Width Triangle $-\frac{1}{2}$ x Base x Height Parallelogram – Base x Height Trapezium – $\frac{1}{2}$ (a + b) x h

Volume

Volume of a prism = Area of cross section x Length

Angles

Sum of interior angles in a polygon (n – 2) x 180

Probability

P(A or B) = P(A) + P(B) - P(A and B)

P(A and B) = P(A given B)P(B)

Compound Interest

Total accrued = P(1 + $\frac{r}{100}$)ⁿ Where P is the Principle amount, r is the interest rate and n is the number of times that the interest is compounded.

Index Laws

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

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

$$(x^{a})^{b} = x^{ab}$$

$$x^{0} = 1 \qquad x^{-a} = \frac{1}{x^{a}}$$

$$x^{\frac{a}{b}} = (\sqrt[b]{x})^{a}$$

 $\sin\theta = \frac{Opposite}{Hypotenuse}$

 $\cos\theta = \frac{Adjacent}{Hypotenuse}$

 $\tan \theta = \frac{Opposite}{Adjacent}$

Higher Only

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

Cosine rule (lengths)
 $a^2 = b^2 + c^2 - 2bc \cos A$

Cosine rule (angles)

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

Area of non-right angled triangles $=\frac{1}{2}ab\sin C$

bu need to know...
Trigonometry

$$\sin \theta = \frac{Opposite}{Hypotenuse}$$

 $\cos \theta = \frac{Adjacent}{Hypotenuse}$
 $\tan \theta = \frac{Opposite}{Adjacent}$
 $\Delta rea of a sector = \frac{\theta}{360} \times \pi r^2$
 $\Delta rc length = \frac{\theta}{360} \times \pi d \text{ or } \frac{\theta}{360} \times 2\pi r$
 $\Delta rc length = \frac{\theta}{360} \times \pi d \text{ or } \frac{\theta}{360} \times 2\pi r$
 $\Delta r = \frac{b}{\sin B} = \frac{c}{\sin C}$
 $\pi = \frac{b}{\sin B} = \frac{c}{\sin C}$

The quadratic formula Higher Only The solutions of $ax^2 + bx + c = 0$

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

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