# 

## GCSE MATHEMATICS FOUNDATION TIER

Formulae Sheet

### Insert

#### Perimeter, area and volume

Where *a* and *b* are the lengths of the parallel sides and *h* is their perpendicular separation:

Area of a trapezium =  $\frac{1}{2}(a+b)h$ 

Volume of a prism = area of cross section × length

Where r is the radius and d is the diameter:

Circumference of a circle =  $2\pi r = \pi d$ 

Area of a circle =  $\pi r^2$ 

#### Pythagoras' Theorem and Trigonometry



In any right-angled triangle where a, b and c are the length of the sides and c is the hypotenuse:

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

In any right-angled triangle ABC where a, b and c are the length of the sides and c is the hypotenuse:

$$\sin A = \frac{a}{c}$$
  $\cos A = \frac{b}{c}$   $\tan A = \frac{a}{b}$ 

#### **Compound Interest**

Where P is the principal amount, r is the interest rate over a given period and n is number of times that the interest is compounded:

Total accrued =  $P\left(1+\frac{r}{100}\right)^n$ 

#### **Probability**

Where P(A) is the probability of outcome *A* and P(B) is the probability of outcome *B*:

$$P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$$

Copyright © 2023 AQA and its licensors. All rights reserved.

IB/M/Insert to GCSE Mathematics Foundation Tier