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Subject Content

Number
Algebra
Ratio, Proportion, Rates of Change
Geometry and Measures
Probability and Statistics

Grades that will be examined:

Higher	1 2 3 4 5 6 7 8 9
Foundation	1 2 3 4 5

You will find some formulas and information in this insert.
It will be very helpful to learn it all, off-by-heart for your exam.

Area of a circle = πr^2

Circumference of a circle = $2\pi r$

Addition/Subtraction

$(+ +)$ becomes +
$(- -)$ becomes + eg. $5 - (-3) = 5 + 3$
$(+ -)$ becomes −
$(- +)$ becomes − eg. $5 + (-3) = 5 - 3$

Multiplication/Division

$(+) \times (+)$ becomes + eg. $(-5) \times (-3) = 15$
$(-) \times (-)$ becomes +
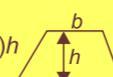$(+) \times (-)$ becomes − eg. $(-5) \times 3 = -15$
$(-) \times (+)$ becomes −

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Prime Numbers

2, 3, 5, 7, 11, 13, 17, 19, 23, 29, . . .
Each prime number has exactly two factors.

Area of a triangle = $\frac{b \times h}{2}$

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

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The Laws of Indices

$x^a \times x^b = x^{a+b}$
$x^a \div x^b = x^{a-b}$
$(x^a)^b = x^{ab}$
$x^{-a} = \frac{1}{x^a}$

Pythagoras

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

Trigonometry

S_{in} — O, H
C_{os} — A, H
T_{an} — O, A

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Fractional Indices

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

Surds

$\sqrt{a} \times \sqrt{a} = a$
$\sqrt{a \times b} = \sqrt{a} \times \sqrt{b}$
$\sqrt{\frac{a}{b}} = \frac{\sqrt{a}}{\sqrt{b}}$

Quadratic Formula

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

Sine Rule

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

Cosine Rule

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

Histograms

frequency density $= \frac{\text{frequency}}{\text{class width}}$

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MATHSWATCH COVERS EVERY TOPIC ON THE GCSE SYLLABUS

Grades that will be examined:

Higher	1 2 3 4 5 6 7 8 9
Foundation	1 2 3 4 5

Grades that can be obtained:

Higher	4 5 6 7 8 9
Foundation	1 2 3 4 5

The Maths Grade 1 to 9 syllabus is split into 5 areas and 258 videos.

Number - 67 videos
Algebra - 68 videos
Ratio and Proportion - 25 videos
Geometry and Measures - 66 videos
Probability and Statistics - 32 videos

How long will it take to revise?

The timings of our videos are:

0 to 5 mins . . . . 110 videos
5 to 10 mins . . . . 121 videos
10 to 15 mins . . . . 22 videos
15 to 20 mins . . . . 4 videos
20 to 25 mins . . . . 1 video