

# Revision Checklist: GCSE AQA Maths (Foundation Tier)

1

2

3

4

5

No understanding

Exam-ready

## 1. NUMBER

Rate topics 1 to 5

a.	Ordering integers, decimals & fractions	
b.	Adding, subtracting, multiplying & dividing positive & negative integers	
c.	Adding, subtracting, multiplying & dividing fractions and decimals	
d.	BIDMAS	
e.	Multiples & factors	
f.	HCF & LCM	
g.	Prime factorisation	
h.	Powers & roots	
i.	Standard form	
j.	Converting between fractions & decimals	
k.	Relating ratio to fractions	
l.	Using fractions as multipliers	
m.	Conversions of length, area, volume & mass	
n.	Estimation	
o.	Rounding	

u. Solve linear inequalities

v. Inequalities on a number line

w. Arithmetic sequences

x. Geometric & Fibonacci sequences

y. nth term of linear sequences

## 3. RATIO, PROPORTION & RATES OF CHANGE

Rate topics 1 to 5

a.	Unit conversions	
b.	Scale factors	
c.	Scale diagrams & maps	
d.	Simplifying ratios	
e.	Using ratios	
f.	Best-buy problems	
g.	Convert between ratios and equations	
h.	Convert between percentages, fractions & decimals	
i.	Percentage change	
j.	Direct & inverse proportion	
k.	Proportion using graphs	
l.	Gradient & rate of change	
m.	Compound interest	

## 2. ALGEBRA

Rate topics 1 to 5

a.	Simplifying algebraic expressions	
b.	Substituting into formulae	
c.	Laws of indices	
d.	Expanding & factorising single brackets	
e.	Expanding & factorising double brackets	
f.	Expanding brackets with surds & fractions	
g.	Changing the subject	
h.	Simple proof	
i.	Simple functions	
j.	Plot straight-line graphs	
k.	Find equation of a straight line	
l.	Parallel lines	
m.	Find quadratic roots graphically	
n.	Sketching linear & quadratic functions	
o.	Sketching cubic & reciprocal functions	
p.	Graphs in real context	
q.	Solve linear equations	
r.	Solve quadratic equations	
s.	Solve linear simultaneous equations	
t.	Translate situations into algebraic equations	

## 4. GEOMETRY & MEASURES

Rate topics 1 to 5

a.	Constructions	
b.	Loci problems	
c.	Angles around a point	
d.	Angles on parallel lines	
e.	Angles in a polygon	
f.	Properties of triangles	
g.	Properties of quadrilaterals	
h.	Congruence	
i.	Similarity	
j.	Pythagoras' theorem	
k.	Transformations of shapes	
l.	Fractional scale factors	
m.	Plans & elevations	
n.	Scale drawings & bearings	
o.	Areas of triangles, parallelograms & trapezia	
p.	Volume of prisms	
q.	Perimeter & area	
r.	Surface area & volume	
s.	Composite shapes	
t.	Composite solids & frustums	
u.	Arc length & area of sector	
v.	Trigonometric ratios	

w.	Exact values of $\sin\theta$ , $\cos\theta$ & $\tan\theta$	
x.	Basic operations with vectors	
y.	Vector diagrams	

	<b>5. PROBABILITY</b>	<u>Rate topics 1 to 5</u>
a.	Frequency tables & trees	
b.	The probability scale	
c.	Two-way tables	
d.	Venn diagrams	
e.	Tree diagrams	
f.	Calculating probabilities	

	<b>6. STATISTICS</b>	<u>Rate topics 1 to 5</u>
a.	Frequency tables <i>again</i>	
b.	Bar charts	
c.	Pie charts	
d.	Pictograms	
e.	Line charts	
f.	Time series data	
g.	Median, mean & mode	
h.	Range & outliers	
i.	Comparing data sets	
j.	Scatter graphs & correlation	
k.	Interpolation & extrapolation	

<b>FORMULAE</b> (not given in exam)	
Circumference of a circle	$C = 2\pi r = \pi d$
Area of a circle	$A = \pi r^2$
Pythagoras' theorem	$a^2 + b^2 = c^2$
Trigonometric ratios	$\sin A = \frac{a}{c}$
	$\cos A = \frac{b}{c}$
	$\tan A = \frac{a}{b}$
Area of a trapezium	$A = \frac{1}{2}(a + b)h$
Volume of a prism	$V = \text{area of cross section} \times \text{length}$
Compound interest	$A = P \left(1 + \frac{r}{100}\right)^n$ A = final amount, P = principal amount, r = interest rate, n = number of times
Probability	$P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$

<b>FORMULAE</b> (given in exam)	
Curved surface area of a cone	$A = \pi r l$
Surface area of a sphere	$A = 4\pi r^2$
Volume of a sphere	$V = \frac{4}{3}\pi r^3$
Volume of a cone	$V = \frac{1}{3}\pi r^2 h$
Kinematics formulae	$v = u + at$
	$s = ut + \frac{1}{2}at^2$
	$v^2 = u^2 + 2as$

<b>ASSESSMENTS</b>	<u>Duration</u>	<u>Marks</u>
Paper 1 (non-calculator)	1 hour 30 minutes	80 marks
Paper 2 (calculator)	1 hour 30 minutes	80 marks
Paper 3 (calculator)	1 hour 30 minutes	80 marks