Year 10 Higher Maths Examinations Summer 2024
Revision List

| Paper 1 Calculators NOT allowed — Topic name	Sparx Code
Recipes	U721
Sharing an amount in a given ratio	U577
Solving and representing inequalities	U759
Probability tree diagrams	U558
Vectors	U564
Bearings	U107
Volume in terms of pi	U915
Area of a circle sector	U373
Ordering numbers in standard form	U330, U534
Laws of incides	U235, U264
Factorising quadratic expressions	U178
Solving quadratic equations by factorising	U228
Changing ratios	U577, U595
Solving linear simultaneous equations	U760
Graphing inequalities	U747
Area and volume in similar shapes	U110
Vectors - geometrical problems	U781
Solving quadratic inequalities	U133

| Paper 2 Calculators allowed — Topic Name	Sparx Code
LCM from the product of prime factors	U250
Drawing cubic graphs	U980
Trigonometry	U283, U545
Vectors	U632
Pythagoras in 2D	U385
Area of a sector of a circle	U373
Reverse percentages	U286
Compound interest	U332
Solving simultaneous equations graphically	U836
Solving quadratic equations graphically (find the roots)	U601
Circle theorems	U459, U251
Direct and inverse proportion problems	U721, U357
Non-right angled trigonometry - sine and cosine rule	U952, U591
Solving quadratic simultaneous equations	U547

PLEASE TURN OVER FOR SOME KEY KNOWLEDGE TO MEMORISE

Useful facts to memorise

Area of a circle	$A = \pi r^2$
Volume of a cuboid	Length x width x height
Volume of a cylinder	$V = \pi r^2 h$
Pythagoras' theorem for missing lengths in right angled triangles	$a^2 + b^2 = c^2$
Speed = distance / time	
Right angled trigonometry	SOH CAH TOA
Sin(x) = opp/adj	
Cos(x) = adj/hyp	
Tan(x) = opp/adj	
Compound interest formula	$p(1 + r/100)^n$
Where p is the principal value, r is the percentage rate and n is the number of years.	
Bearings are measured	From North, clockwise with 3 digits

Sine Rule for finding a missing length	$\dfrac{a}{sinA} = \dfrac{b}{sinB} = \dfrac{c}{sinC}$
Sine rule for finding a missing angle	$\dfrac{sinA}{a} = \dfrac{sinB}{b} = \dfrac{sinC}{c}$
Cosine Rule for finding a missing length	$a^2 = b^2 + c^2 - 2bc\cos A$
Cosine rule for finding a missing angle	$\cos A = \dfrac{b^2 + c^2 - a^2}{2bc}$
Sine rule for the area of a triangle	$Area = \dfrac{1}{2} absinC$

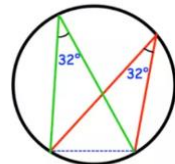**Circle theorems**
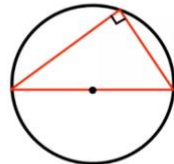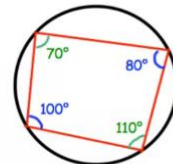

The angle in a semi-circle is 90°
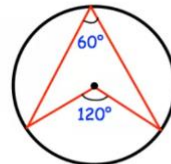
The angle at the circumference is half the angle at the centre

The angles in the same segment from a common chord are equal

The opposite angles in a cyclic quadrilateral always add to 180°