Year 11 Assessment A

Non-Calculator

Assessment 1: 22ⁿᵈ April 2021

Assessment 2: 23ʳᵈ April 2021

Higher Tier

Paper A1 Topic List

Use: vle.mathswatch.co.uk

Prime factor decomposition
Decimal multiplication
Pythagoras' Theorem
Cumulative frequency diagrams: drawing and interpreting
Probability tree diagrams
Capture recapture
Functions (composite and inverse)
Surds (rationalising denominators, to include simplifying)
Area of sectors and circles: forming and solving equations

Paper A2 Topic List

Use: vle.mathswatch.co.uk

Sequences – finding the nth term of a linear sequence
Recognising graphs: cubic; quadratic; reciprocal
Angles in parallel lines and triangles
Compound measures ($Pressure = \frac{Force}{Area}$)
Ratio to fraction conversions
Reverse means
Reverse percentages
Negative and fractional indices
Combining ratios
Algebraic proof
Finding equations of perpendicular lines
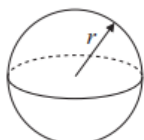Non-linear simultaneous equations
Geometric proof

Volume of cone $= \frac{1}{3}\pi r^2 h$

Curved surface area of cone $= \pi r l$

Volume of sphere $= \frac{4}{3}\pi r^3$

Surface area of sphere $= 4\pi r^2$

Formulae provided to you in the assessment include those overleaf. Questions involving spheres and cones will have the formulae provided in the question.

Revision?

1) Complete the work set on vle.mathswatch.co.uk
This work will be specific to your upcoming assessments.
2) Watch the associated videos if you are stuck.
3) Utilise the practice exam packs you have been given. Worked solutions for each pack are on classcharts.
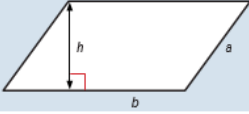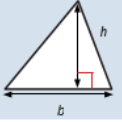4) Utilise corbettmaths.com for further videos

Year 11 Assessment B
Calculator
Assessment 3: 29th April 2021

Higher Tier

Paper B1 Topic List
Use: vle.mathswatch.co.uk

Lowest common multiple
Highest common factor (index notation)
Drawing quadratic graphs
Solving equations graphically
Compound measures ($Pressure = \frac{Force}{Area}$)
Box plots
Simplifying algebraic indices
Calculating the gradient from a graph
Interpreting straight line graphs in context
Forming and solving quadratic equations
Completing the square & turning points
Surface area of cones and frustums
Iteration
Equations of circles and tangents to circles

Revision?

1) Complete the work set on
   vle.mathswatch.co.uk
   This work will be specific to your upcoming
   assessments.
2) Watch the associated videos if you are
   stuck.
3) Utilise the practice exam packs you have
   been given. Worked solutions for each
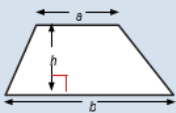   pack are on classcharts.
4) Utilise corbettmaths.com for further
   videos

MathsWatch

Corbettmaths

GCSE Mathematics
Practice Tests: Set 1

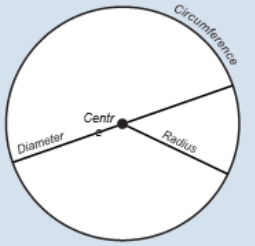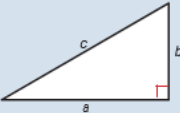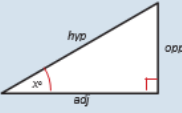# Formulae provided in the assessments (H)

Areas

Rectangle = $l \times w$	
Parallelogram = $b \times h$	
Triangle = $\frac{1}{2} b \times h$	
Trapezium = $\frac{1}{2}(a + b)h$	

Circles

Circumference = $\pi \times$ diameter, $C = \pi d$	
Circumference = $2 \times \pi \times$ radius, $C = 2\pi r$	
Area of a circle = $\pi \times$ radius squared $A = \pi r^2$	

Pythagoras

Pythagoras' Theorem. For a right-angled triangle, $a^2 + b^2 = c^2$	
Trigonometric ratios (*new to F*) $\sin x° = \dfrac{opp}{hyp}$, $\cos x° = \dfrac{adj}{hyp}$, $\tan x° = \dfrac{opp}{adj}$	
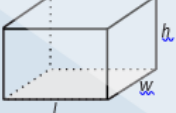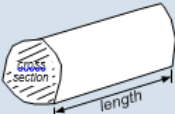
Quadratic equations

The Quadratic Equation. The solutions of $ax^2 + bx + c = 0$, where $a \neq 0$, are given by $x = \dfrac{-b \pm \sqrt{(b^2 - 4ac)}}{2a}$

Volumes

Cuboid = $l \times w \times h$	
Prism = area of cross section × length	
Cylinder = $\pi r^2 h$	
Volume of pyramid =	

Compound measures

Speed $\quad$ speed = $\dfrac{\text{distance}}{\text{time}}$	
Density $\quad$ density = $\dfrac{\text{mass}}{\text{volume}}$	
Pressure $\quad$ pressure = $\dfrac{\text{force}}{\text{area}}$	
Pressure $\quad$ pressure = $\dfrac{\text{force}}{\text{area}}$	

Trigonometric formulae

Sine Rule $\dfrac{a}{\sin A} = \dfrac{b}{\sin B} = \dfrac{c}{\sin C}$	
Cosine Rule $a^2 = b^2 + c^2 - 2bc \cos A$	
Area of triangle = $\frac{1}{2} ab \sin C$	