♦ FORMULAE AND TABLES PROVIDED IN THE EXAMINATION

LIST OF FORMULAE

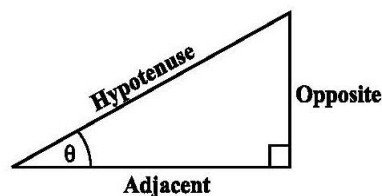|	
Volume of a prism	$V = Ah$ where A is the area of a cross section and h is the perpendicular length.
Volume of cylinder	$V = \pi r^2 h$ where r is the radius of the base and h is the perpendicular height.
Volume of a right pyramid	$V = \dfrac{1}{3} Ah$ where A is the area of the base and h is the perpendicular height.
Circumference	$C = 2\pi r$ where r is the radius of the circle.
Arc length	$S = \dfrac{\theta}{360} \times 2\pi r$ where θ is the angle subtended by the arc, measured in degrees.
Area of a circle	$A = \pi r^2$ where r is the radius of the circle.
Area of a sector	$A = \dfrac{\theta}{360} \times \pi r^2$ where θ is the angle of the sector, measured in degrees.
Area of trapezium	$A = \dfrac{1}{2} (a + b) h$ where a and b are the lengths of the parallel sides and h is the perpendicular distance between the parallel sides.
Roots of quadratic equations	If $ax^2 + bx + c = 0$, then $x = \dfrac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
Trigonometric ratios	$\sin \theta = \dfrac{\text{opposite side}}{\text{hypotenuse}}$ $\cos \theta = \dfrac{\text{adjacent side}}{\text{hypotenuse}}$ $\tan \theta = \dfrac{\text{opposite side}}{\text{adjacent side}}$
Area of triangle	$\text{Area of } \Delta = \dfrac{1}{2} bh$ where b is the length of the base and h is the perpendicular height. $\text{Area of } \Delta ABC = \dfrac{1}{2} ab \sin C$ $\text{Area of } \Delta ABC = \sqrt{s (s - a) (s - b) (s - c)}$ where $s = \dfrac{a + b + c}{2}$
Sine rule	$\dfrac{a}{\sin A} = \dfrac{b}{\sin B} = \dfrac{c}{\sin C}$
Cosine rule	$a^2 = b^2 + c^2 - 2bc \cos A$