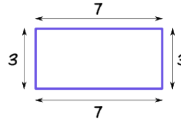
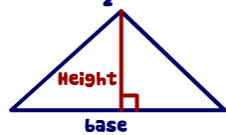
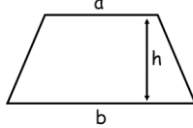
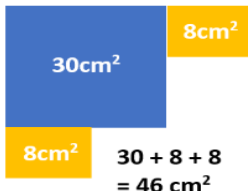
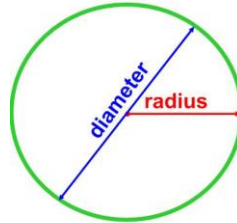
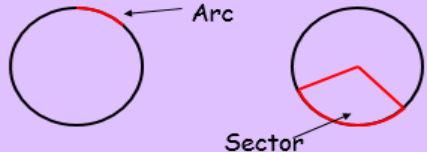
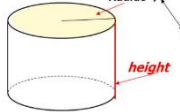
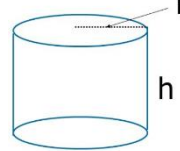

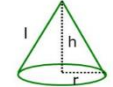


UNIT 7H AREA & VOLUME 100% SHEET

DEFINITIONS OF KEYWORDS	METRIC CONVERSIONS		PRIOR KNOWLEDGE
<p>Perimeter – The total length of the outside of shape</p> <p>Surface Area – The total surface of a shape.</p> <p>Volume – The amount of space that a substance or object occupies.</p> <p>Capacity – Related to volume, the amount of space the something can contain.</p> <p>Prism – A 3D shape with the same cross-sectional area across at least one length.</p> <p>Compound – A shape that is made up of 2 or more basic shapes.</p> <p>Sector – A part of a circle.</p> <p>Circumference – The perimeter of a circle.</p>	<p>Length</p> <p style="text-align: center;"> $\begin{matrix} \times 1000 & \times 100 & \times 10 \\ \text{Km} & \text{m} & \text{cm} & \text{mm} \\ \div 1000 & \div 100 & \div 10 & \end{matrix}$ </p> <p>Area</p> <p style="text-align: center;"> $\begin{matrix} \times 1000^2 & \times 100^2 & \times 10^2 \\ \text{Km}^2 & \text{m}^2 & \text{cm}^2 & \text{mm}^2 \\ \div 1000^2 & \div 100^2 & \div 10^2 & \end{matrix}$ </p> <p>Volume</p> <p style="text-align: center;"> $\begin{matrix} \times 1000^3 & \times 100^3 & \times 10^3 \\ \text{Km}^3 & \text{m}^3 & \text{cm}^3 & \text{mm}^3 \\ \div 1000^3 & \div 100^3 & \div 10^3 & \end{matrix}$ </p>		<p>Perimeter: $7 + 3 + 7 + 3 = 20$</p> <p>Area of Rectangle $7\text{cm} \times 3\text{cm} = 21\text{cm}^2$</p> <p>Rounding to decimal places 2.4684 to 2 Decimal Places is 2.47</p> 
	AREA OF 2D SHAPES	COMPOUND SHAPES	CIRCLES
	<p>Triangle</p> <p>Area = $\frac{1}{2} \text{base} \cdot \text{height}$</p>  <p>Trapezium</p>  <p>Area of Trapezium = $\frac{1}{2}h(a+b)$</p>	<p>Area of a compound Shape:</p>  <p>$30\text{cm}^2 + 8\text{cm}^2 + 8\text{cm}^2 = 46\text{cm}^2$</p> <ol style="list-style-type: none"> Split the compound shape into simple 2D shapes. Calculate the area of these. Find the sum of the 2D shapes. 	 <p>Area of a circle = $\pi \times \text{radius}^2$</p> <p>Circumference of a circle = $\pi \times \text{diameter}$</p> <p>remember that the diameter = 2 x radius</p>
ARCS & SECTORS	CYLINDERS	CONES	
 <p><u>Length of an Arc</u></p> $\pi d \times \frac{\text{angle at centre}}{360}$ <p><u>Area of a Sector</u></p> $\pi r^2 \times \frac{\text{angle at centre}}{360}$	<p>Volume</p> $V = \pi r^2 h$  <p>Surface Area</p>  <p>r = radius h = height</p> $SA = 2\pi r^2 + 2\pi rh$	<p>Volume</p> $V = \frac{\pi r^2 h}{3}$  <p>Surface Area</p>  $SA = \pi r l + \pi r^2$ <p>radius, Slant height, radius</p>	