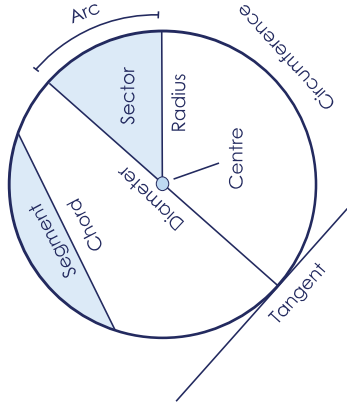


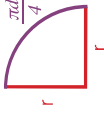
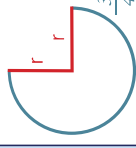

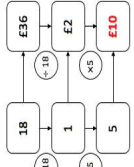
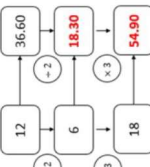


KPI 8.07 Circumference

1) Diameter	A straight line going straight through the centre of the circle and touching the circumference at each end.	
2) Radius Plural: radii	A straight line joining the centre to the circumference.	
3) Chord	A straight line joining any two parts of the circumference.	
4) Tangent	A straight line that touches the circumference at a single point.	
5) Arc	A section of the circumference.	
6) Sector	The area bound by two radii and an arc.	
7) Segment	The area bound by the circumference and a chord.	
8) Circumference	<p>The perimeter of the circle. $C = \pi \times \text{diameter}$ $C = \pi \cdot d$</p> <p>$d = 5\text{cm}$ $C = \pi d$ $C = \pi \times 5$ $C = 5\pi\text{cm}$ $C = 15.70796327\text{cm}$ $C = 15.7\text{cm}$ (3sf)</p> 	<p>9) π (Pi)</p> <p>The ratio of a circle's circumference to its diameter. It has an estimated value of $\frac{22}{7}$ or 3.14 rounded to 3 significant figures.</p>
10) Revolution	A revolution is a full turn of a circle. The distance covered by one revolution is equal to the circumference of the circle.	<p>13) Semi circle</p>  <p>Perimeter $\frac{\pi d}{2} + d$</p>
12) Quarter- circle	 <p>Perimeter $\frac{\pi d}{4} + 2r$</p>	<p>14) Three-quarter circle</p>  <p>Perimeter $\frac{3}{4}\pi d + 2r$</p>

KPI 8.08 Direct Proportion		KPI 8.09 Fractions, Decimals and Percentages																												
<p>1) Proportion</p> <p>A relationship between two quantities.</p>	<p>2) Direct proportion</p> <p>A relationship between two variables where, as one increases, the other also increases. The graphical representation of this relationship is a straight line through the origin.</p> 	<p>2) Fraction to decimal</p> <p>Divide the numerator by the denominator. $\frac{1}{5} \rightarrow 1 \div 5 \rightarrow 0.2$ $\frac{0.2}{5} \rightarrow 4 \div 10$</p>																												
<p>3) Unitary method</p> <p>To find the value of one unit first.</p> 	<p>5) Best buy</p> <p>Better value for money means that the cost is cheaper when buying an identical item or amount. Equal quantities must be compared.</p>	<p>3) Decimal to percentage</p> <p>Multiply by 100 and add the percentage symbol. $0.09 \rightarrow 0.09 \times 100 = 9\%$</p>																												
<p>4) Multiple intersections</p> 	<p>6) Recipes</p> <p>Option 1: Find the amount of ingredients needed for a specific number of people. Option 2: Find how much of the recipe can be made with the quantities available in the question.</p>	<p>4) Percentage to fraction</p> <p>Write the percentage as the numerator and make 100 the denominator. Simplify if possible. $30\% \rightarrow \frac{30}{100} = \frac{3}{10}$</p>																												
<p>1) Common conversions</p> <table border="1"> <thead> <tr> <th>Fraction</th> <th>Decimal</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>$\frac{1}{10}$</td> <td>0.1</td> <td>10%</td> </tr> <tr> <td>$\frac{1}{8}$</td> <td>0.125</td> <td>12.5%</td> </tr> <tr> <td>$\frac{1}{5}$</td> <td>0.2</td> <td>20%</td> </tr> <tr> <td>$\frac{1}{4}$</td> <td>0.25</td> <td>25%</td> </tr> <tr> <td>$\frac{1}{3}$</td> <td>0.33333...</td> <td>33.3% (1dp)</td> </tr> <tr> <td>$\frac{1}{2}$</td> <td>0.5</td> <td>50%</td> </tr> <tr> <td>$\frac{3}{4}$</td> <td>0.75</td> <td>75%</td> </tr> <tr> <td>$\frac{1}{1}$</td> <td>1</td> <td>100%</td> </tr> </tbody> </table>		Fraction	Decimal	Percentage	$\frac{1}{10}$	0.1	10%	$\frac{1}{8}$	0.125	12.5%	$\frac{1}{5}$	0.2	20%	$\frac{1}{4}$	0.25	25%	$\frac{1}{3}$	0.33333...	33.3% (1dp)	$\frac{1}{2}$	0.5	50%	$\frac{3}{4}$	0.75	75%	$\frac{1}{1}$	1	100%	<p>4) Percentage change</p> <p>Percentage Increase or Decrease = $\frac{\text{Change}}{\text{Original}} \times 100$</p>	
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