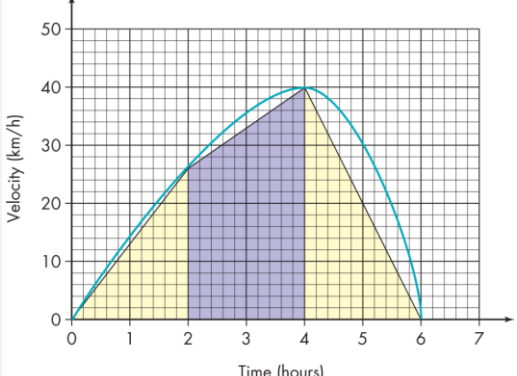
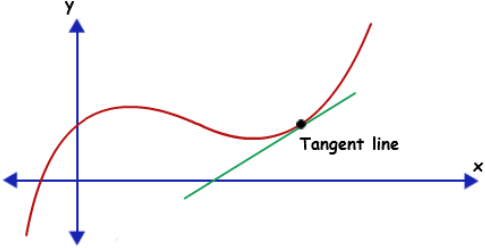
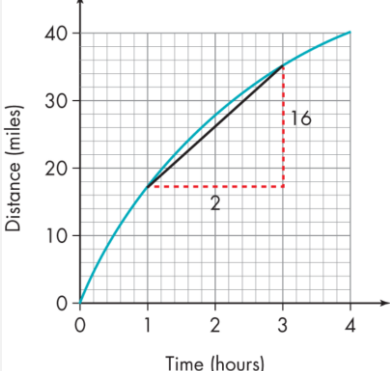
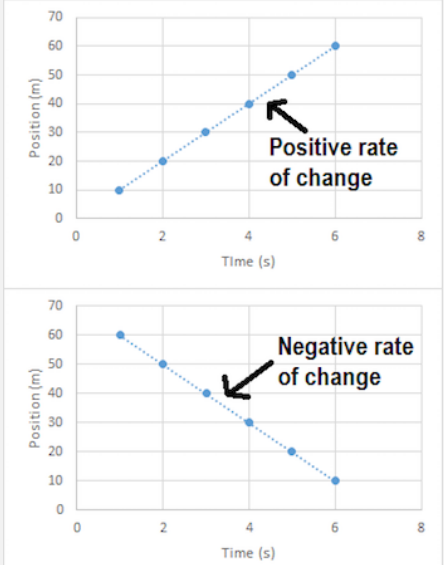
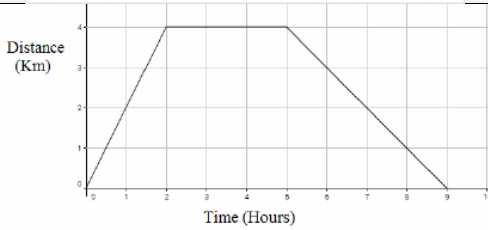


Topic: Area Under Graph and Gradient of Curve

Topic/Skill	Definition/Tips	Example
<p>1. Area Under a Curve</p>	<p>To find the area under a curve, split it up into simpler shapes – such as rectangles, triangles and trapeziums – that approximate the area.</p>	
<p>2. Tangent to a Curve</p>	<p>A straight line that touches a curve at exactly one point.</p>	
<p>3. Gradient of a Curve</p>	<p>The gradient of a curve at a point is the same as the gradient of the tangent at that point.</p> <ol style="list-style-type: none"> 1. Draw a tangent carefully at the point. 2. Make a right-angled triangle. 3. Use the measurements on the axes to calculate the rise and run (change in y and change in x) 4. Calculate the gradient. 	 $\text{Gradient} = \frac{\text{Change in } y}{\text{Change in } x}$ $= \frac{16}{2} = 8$

<p>4. Rate of Change</p>	<p>The rate of change at a particular instant in time is represented by the gradient of the tangent to the curve at that point.</p>	
<p>5. Distance-Time Graphs</p>	<p>You can find the speed from the gradient of the line (Distance \div Time) The steeper the line, the quicker the speed. A horizontal line means the object is not moving (stationary).</p>	
<p>6. Velocity-Time Graphs</p>	<p>You can find the acceleration from the gradient of the line (Change in Velocity \div Time) The steeper the line, the quicker the acceleration. A horizontal line represents no acceleration, meaning a constant velocity. The area under the graph is the distance.</p>	