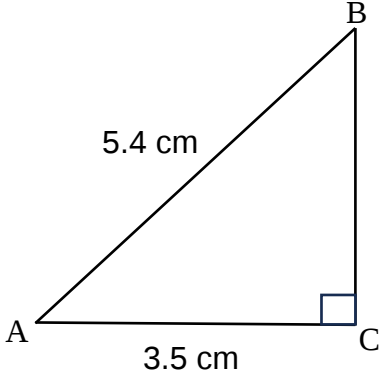
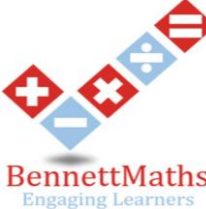
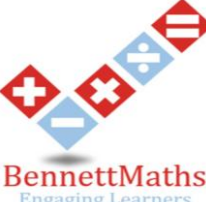
 Questions	Maths Paper 3 - Higher	
Solve $4 - 5x \geq 10$	The gradient of a radius of a circle is -3. The tangent to the circle passes through the point (6,2). Work out the equation of the tangent	Leo travels 240 miles in 4.5 hours. Work out his average speed.
The length of a cube is 7cm. Work out the volume of the cube. Give your answer in mm^3	Work out the length of BC 	Work out the nth term of 4,10,16,22...
Solve $3x^2 + 4x - 10 = 0$	Express 60 as a product of prime factors Find the HCF of 60 and 90	Solve $\frac{2x}{12} = \frac{18}{4}$

 Questions	Maths Paper 3 - Higher																	
Find the nth term of 4,9,14,19 ...	There are 3 starters, 5 mains and 6 desserts on a menu. How many different 3 course combinations are possible?	Convert 0.43 into a fraction																
Estimate the mean <table><tr><th>Time (t)</th><th>Frequency</th><th></th><th></th></tr><tr><td>$0 \leq t < 1$</td><td>5</td><td></td><td></td></tr><tr><td>$1 \leq t < 2$</td><td>8</td><td></td><td></td></tr><tr><td>$2 \leq t < 3$</td><td>1</td><td></td><td></td></tr></table>	Time (t)	Frequency			$0 \leq t < 1$	5			$1 \leq t < 2$	8			$2 \leq t < 3$	1			The density of an object is 4g/cm^3 The mass is 50g. Work out the volume.	Solve $3x + y = 10$ $4x - 2y = 10$
Time (t)	Frequency																	
$0 \leq t < 1$	5																	
$1 \leq t < 2$	8																	
$2 \leq t < 3$	1																	
A number, n, is rounded to 1d.p. The result is 43.2. Complete the error interval $___\leq n < ___\$	$f(x) = 8x^2$ $g(x) = x + 2$ (a) Work out $gf(3)$ (b) Work out $fg(x)$	$f(x) = 8x^2$ $g(x) = x + 2$ (a) Work out $f^{-1}(x)$ (b) Work out $g^{-1}(x)$																

 <u>Examples/ Key words</u>	<u>Maths Paper 3 - Higher</u>	
Convert 3200 into standard form $3200 = 3.2 \times 10^3$ Work out $4.2 \times 10^4 + 8 \times 10^3$. Give your answer in standard form $42,000 + 8000 = 50,000$ $50,000 = 5 \times 10^4$	The 5 values required for a boxplot are: • Lowest value • Lower quartile • Median • Upper quartile • Highest Value	Estimate = make the question easier by rounding Evaluate = work out the answer Express = Write in the different way Simplify = Change the appearance
Volume of a cube = base x height x depth or length³ Surface area of a cuboid = The sum of the area of the 3 pairs of congruent rectangles	The volume of a shape is 20cm³. The mass of the shape is 120g. Find the density. Density = g:cm³ 120:20 6:1 Density = 6g/cm³	Angles in regular polygons: Sum of the interior angles = $(n - 2) \times 180$ To find an interior angle = $\frac{\text{total}}{n}$ n= number of angles/sides. Sum of the exterior angles = 360° To find an exterior angle = $\frac{360}{n}$ n= number of angles/sides
Gradient of a curve = draw tangent of the curve and find the gradient $\frac{\text{difference in } y}{\text{difference in } x}$	When drawing a cumulative frequency graph, use the end point of the range	Circle Theorem Tips: • Radius and tangent = 90° • Radius and chord = alternate segment theorem • 2 radii = an isosceles triangle