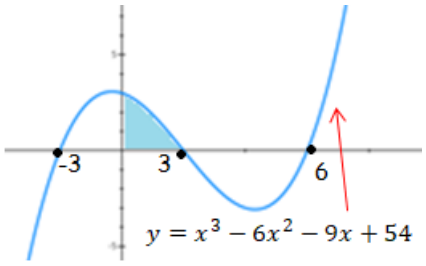
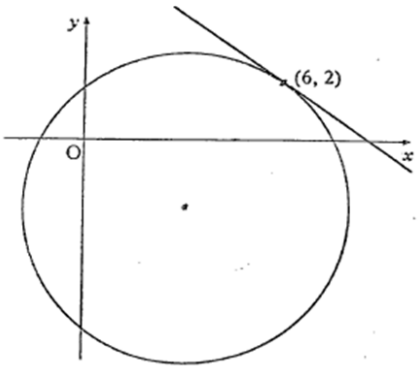
Name:	Date:
Question 1: Solve $x^2 - 10x + 21 > 0$.	8·3 Silver Outcome 2
Question 2: Show that $(x-2)$ is a factor of $f(x) = x^3 + x^2 - 76x + 140$ and hence factorise it fully.	7·1 Bronze Outcome 1
Question 3: If A is an acute angle with $\cos A = \frac{1}{5}$ find the exact value of $\cos 2A$.	10·1 Silver Outcome 2
Question 4: If $v(r) = \frac{4}{3}\pi r^3$, what is the rate of change of V with respect to r when r = 5?	6·2 Gold Outcome 2
Question 4: The curve $y = x^3 - 6x^2 - 9x + 54$ intersects the x-axis at x = -3, 3 and 6. Calculate the shaded area enclosed by the curve and the x-axis. 	9·4 Bronze Outcome 1
My score:	

Exam Questions

Question 1:

The circle shown has equation $(x-3)^2+(y+2)^2=25$.



Find the equation of the tangent at the point (6, 2). **4**

Question 2:

Solve the equation
$\sin 2x - \cos x = 0$ for $0 \le x \le 2\pi$. **5**

Question 3:

A curve has equation $y = 3x^2 - x^3$.

(*a*) Find the coordinates of the stationary points on this curve and determine their nature. **6**

(*b*) State the coordinates of the points where the curve meets the coordinate axes and sketch the curve. **2**

My score: