Name:	Date:
Question 1: Show that $(x+5)$ is a factor of $x^3+12x^2+27x-40$ and hence factorise it fully.	7·1 Bronze Outcome 1
Question 2: Find the maximum and minimum values for $f(x)=x^3-9x^2$ in the closed interval $-1 \leq x \leq 7$.	6·6 Outcome 1
Question 3: Show that the circles $(x+4)^2+(y-9)^2=17$ and $x^2+y^2-6x+2y-3=0$ do not intersect.	11·4 Gold Outcome 3
Question 4: Solve $\sin 2x-\sin x=0$ for $0 \leq x \leq 2\pi$.	10·2 Silver Outcome 2
Question 5: Find the equation of the tangent to the curve $y=x^3-8x$ at the point where $x=-2$.	6·3 Silver Outcome 2
My score:	

Exam Questions

Question 1:

Express $-3x^2-6x+7$ in the form $a(x+b)^2+c$. 3

Question 2:

If $f(x)=\cos(2x)-3\sin(4x)$, find the exact value of $f'\left(\frac{\pi}{6}\right)$. **4**

Question 3:

Solve the equation

$$\log_2(x+1)-2\log_2(3)=3.$$ **4**

My score: