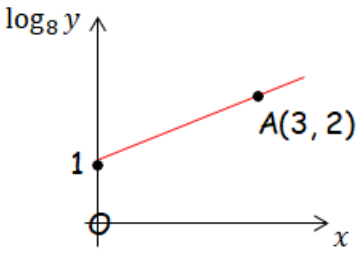
Name:	Date:
Question 4:  Evaluate $\int_1^3 x^3 + 2x^2 + 3x + 7\,dx$	9·2 Silver Outcome 2
Question 2: For the graph below, two variables, x and y, are connected by the law $y = ka^x$.  Find the values of k and a.	14·4 Silver Outcome 2
Question 3: Differentiate $\sin^5 x$ with respect to x.	13·1 Gold Outcome 3
Question 4: Express $-8x^2 - 16x + 2$ in the form $a(x+b)^2 + c$.	8·2 Silver Outcome 1
Question 5:  Show that the circles $x^2 + y^2 + 8x - 12y - 10 = 0$ and $x^2 + y^2 - 14x + 2y + 3 = 0$ intersect at two points.	11·4 Bronze Outcome 1
My score:	

Exam Questions

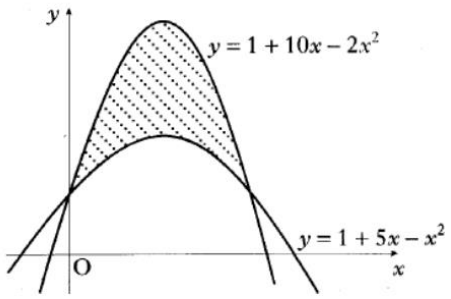
Question 1:

Find the equation of the tangent to the curve $y = 2x^3 + 3$ at the point where $x = -2$.

4

Question 2:

Calculate the shaded area enclosed between the parabolas with equations $y = 1 + 10x - 2x^2$ and $y = 1 + 5x - x^2$.



6

Question 3:

Solve $2\cos 2x - 5\cos x - 4 = 0$ for $0 \leq x < 2\pi$.

5

My score: