Y12 : PRACTICE ASSESSMENT A.	ACHIEVEMENT LEVEL ONLY.
Algebra.	Calculus.
1. Expand:	1. Find the gradient
(3x-4)(5x+2)	$of y = 3x^2 at x = 4$
$(x-2)(x^2-3x+4)$	
(x-3)(x+4)(x-1)	2. Find the x value of the point on the curve $y = x^2 - 8x$
2. Simplify fully: (a) $\sqrt{(16p^{16})}$	where the gradient equals 6.
(b) $(8c^6d^9)^{\frac{1}{3}}$	
<ul> <li>3. Combine into one log function:</li> <li>(a) 4log p + 5log v</li> </ul>	3. Find the x value of the point on the curve $y = 3x^2 - 12x$ where the gradient is zero.
(b) $5\log 2 - 3\log 5$	4. Find y if
4. Simplify fully: (a) $\frac{5}{4k} + \frac{3}{k}$	$y' = 3x^2 + 8x + 3$
(b) $\frac{4}{(x+2)}^{+} \frac{x}{(x+1)}$	5. Find the equation of the curve given that $\frac{dy}{dx} = 4x^3 - 6x$ $\frac{dx}{dx}$ and the point (2, 4) is on the curve
5. Solve: (a) $9(x+2)-5(x-3)=9$	
(b) $5x^2 - 2x - 7 = 0$	6. If $y' = 3x^2 + 2$ find y if $x = 2$ , $y = 3$
(c) $2^x = 128$	
(d) $\log_2 x = 5$	7 If $y - 4r^6$ find dy
(e) $\log_{b} 64 = 3$	$\int dx = \frac{dx}{dx}$
6. Factorise: (a) $9x^2 - 25y^2$	8. If $\frac{dy}{dx} = 4x^6$ find y
(b) $12a^4b^3 - 8a^3b^2$	
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