

DIFFERENTIATION & FUNCTIONS (Q 6, 7 & 8, PAPER 1)

LESSON NO. 4: DIFFERENTIATION 2: PRODUCTS

2007

7 (b) (i) Differentiate $(x^2 + 9)(4x^3 + 5)$ with respect to x .

2005

7 (b) (i) Differentiate $(3x^2 - 2)(x^2 + 4)$ with respect to x .

2004

7 (b) (i) Differentiate $(x^2 - 4)(x^2 + 3x)$ with respect to x .

2003

7 (b) (ii) Given that $y = (5x^2 + 3)(4 - x^2)$, find $\frac{dy}{dx}$ when $x = 1$.

2002

6 (b) (ii) Find $\frac{dy}{dx}$ where $y = (x^3 - 3)(x^2 - 4)$ and simplify your answer.

1997

7 (b) (i) Find $\frac{dy}{dx}$ when $y = (x^2 - 3)(1 - x)$.

ANSWERS

2007 7 (b) (i) $20x^4 + 108x^2 + 10x$

2005 7 (b) (i) $12x^3 + 20x$

2004 7 (b) (i) $4x^3 + 9x^2 - 8x - 12$

2003 7 (b) (ii) 14

2002 6 (b) (ii) $5x^4 - 12x^2 - 6x$

1997 7 (b) (i) $-3x^2 + 2x + 3$