



CHEMISTRY ONLINE
— **TUITION** —

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PURE MATH

ALGEBRA AND FUNCTION

Level & Board

EDEXCEL (A-LEVEL)

TOPIC:

DIFFERENTIATION

PAPER TYPE:

QUESTION PAPER - 9

TOTAL QUESTIONS

8

TOTAL MARKS

43

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Questions**Q1.**

A curve has equation

$$y = \sqrt{\cos(3x^3 + 2x)}$$

(a) Find, in simplest form, $\frac{dy}{dx}$ (3)

(b) Hence find the exact range of value of x for which the curve is increasing. (2)

(Total for question = 5 marks)

Q2.

A curve has equation

$$y = (2x^3 - 5x^{2+4})^4$$

(a) Find, in simplest form, $\frac{dy}{dx}$ (3)

(b) Hence find the exact range of value of x for which the curve is increasing. (3)

(Total for question = 6 marks)

I am Sorry !!!!!

Q3.

A curve has equation

$$y = \sqrt{2x^2 + 3x - 1}$$

(a) Find, in simplest form, $\frac{dy}{dx}$

(2)

(b) Hence find the exact range of value of x for which the curve is increasing.

(3)

(Total for question = 5 marks)



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Q4.

A curve has equation

$$y = e^{2x^2 + 3x}$$

(a) Find, in simplest form, $\frac{dy}{dx}$

(3)

(b) Hence find the exact range of value of x for which the curve is increasing.

(3)

(Total for question = 6 marks)

Q5.

A curve has equation

$$y = \ln(3x^2 + 3x)$$

(a) Find, in simplest form, $\frac{dy}{dx}$

(2)

(b) Hence find the exact range of value of x for which the curve is increasing.

(2)

(Total for question = 4 marks)

Q6.

A curve has equation

$$y = \sin(2x^2 + 3x)$$

(a) Find, in simplest form, $\frac{dy}{dx}$

(4)

(b) Hence find the exact range of value of x for which the curve is increasing.

(2)

(Total for question = 6 marks)

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Q7.

A curve has equation

$$y = \sqrt{\ln(2x + 1)}$$

(a) Find, in simplest form, $\frac{dy}{dx}$ **(2)****(b)** Hence find the exact range of value of x for which the curve is increasing.**(2)****(Total for question = 4 marks)****Q8.**

A curve has equation

$$f(x) = \cos(3x^2 + 2x + 1)$$

(a) Find, in simplest form, $\frac{dy}{dx}$ **(4)****(b)** Hence find the exact range of value of x for which the curve is increasing.**(3)****(Total for question = 7 marks)**

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DR. ASHAR RANA



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- Tutoring students in UK and worldwide since 2008
- CIE & EDEXCEL Examiner since 2015
- Chemistry, Physics, and Math's Tutor

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