PURE MATH

ALGEBRA AND FUNCTION

Level & Board	EDEXCEL (A-LEVEL)
TOPIC:	DIFFERENTIATION
PAPER TYPE:	QUESTION PAPER - 7
TOTAL QUESTIONS	8
TOTAL MARKS	43

Questions
Q1.

A curve has equation

$$y = \frac{x^3 - 2x^2 + 4x - 8}{x^2 - 2x + 1}$$

(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

$$y = \frac{x^4 - 3x^2 + 2x^2 + 5x - 6}{x^3 - 2x^2 + x}$$

(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

$$y = \frac{x^5 - 2x^4 + 3x^3 + 2x^2 - 5x + 6}{x^4 - 3x^3 + 2x^2 - 1}$$

(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)

Q4.

A curve has equation

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

(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

$$y = \frac{x^4 - 2x^3 + 3x^2 + 4x - 5}{x^3 - 3x^2 + 2x}$$

(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

$$y = \frac{x^3 - 2x^2 + 3x - 4}{x^2 - 3x + 2}$$

(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)

Q7.

A curve has equation

$$y = \frac{x^4 - 4x^3 + 6x^2 - 8x + 10}{x^3 - 3x^2 + 2x}$$

(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

$$y = \frac{x^3 - 2x^2 + x - 6}{x^2 - 2x + 1}$$

(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)

I am Sorry !!!!!

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