



QUESTION ONE

- (a) Express as a single fraction, and simplify

$$\frac{3}{x-2} - \frac{2}{x+2}$$

(4 marks)

- (b) Make the symbol indicated in square brackets the subject of each of the formulae shown below:

(i) $m = \frac{2(T-an)}{n(n-1)}$ [a]

(ii) $V = \frac{Er}{R+r}$ [r]

(8 marks)

- (c) Solve the simultaneous equations:

$$y - 3x + 2 = 0$$

$$5x^2 + y^2 - 4xy + 7x - 18 = 0$$

(8 marks)

- (d) Simplify, using factorising:

(i) $\frac{10p^2}{(p-2q)} \div \frac{15pq}{2p-4q}$

(ii) $\frac{m^2 - 4n^2}{4mn} \times \frac{6m^2}{(m+2n)^2}$

(5 marks)