7 The functions f, g and h are defined by

$$f: x \mapsto 3x - 1$$

$$g: x \mapsto 2x^2$$

$$h: x \mapsto \frac{1}{x+1} \qquad x \neq -1$$

(a) Find (i) $g(\sqrt{6})$

 (ii) $h\left(-\frac{1}{3}\right)$

(2)

(b) Express hf(x) in terms of x, simplifying your answer.

(1)

(c) Solve the equation

 (i) $g(x) = \frac{25}{8}$

 (ii) $gf(x) = x$

(7)

Question 7 continued

Question 7 continued

P 4 8 4 1 2 A 0 1 4 3 2

Question 7 continued

(Total for Question 7 is 10 marks)