January 2019 Paper 1H Question 19

1   g is the function with domain $x \geq -3$ such that $g(x) = x^2 + 6x$

(a) Write down the range of g^{-1} **(1)**

(b) Express the inverse function g^{-1} in the form $g^{-1} : x \to ...$ **(4)**

(5 marks)

June 2019 Paper 2H Question 24

2   The function f is such that $f(x) = 3x - 2$

(a) Find f(5)   **(1)**

The function g is such that $g(x) = 2x^2 - 20x + 9$ where $x \geq 5$

(b) Express the inverse function g^{-1} in the form $g^{-1}(x) = ...$ **(4)**

(5 marks)

May 2018 Paper 1H Question 14

3   The function f is such that

$$f(x) = \frac{3x - 2}{4}$$

(a) Find f(-7)   **(1)**

(b) Express the inverse function f^{-1} in the form $f^{-1}(x) = …$ **(2)**

The function g is such that

$$g(x) = \sqrt{19 - x}$$

(c) Find fg(3)   **(2)**

(d) Which values cannot be included in any domain of g?   **(2)**

(7 marks)

Sample Paper 2H Question 17

4   The function f is such that

$$f(x) = \frac{3}{x - 2}$$

(a) Find f(1)   **(1)**

(b) State which value of x must be excluded from any domain of f   **(1)**

The function g is such that $g(x) = x + 4$

(c) Calculate fg(2)   **(2)**

(4 marks)

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