

Name: _____

IGCSE

Functions

Instructions

- Use **black** ink or ball-point pen.
- Answer all questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- You must **show all your working out.**

Information

- The marks for each question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end

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 $g^{-1} : x \rightarrow \dots$

$g^{-1} : x \rightarrow$
(4)

(Total for Question 1 is 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 $g^{-1}(x) = \dots$

$g^{-1}(x) = \dots$

(4)

(Total for Question 2 is 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 $f^{-1}(x) = \dots$

$$f^{-1}(x) = \dots$$

(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)

(Total for Question 3 is 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)

(Total for Question 4 is 4 marks)
