Functions
Difficulty: Easy

Question Paper 4

Level	IGCSE
Subject	Maths (0580/0980)
Exam Board	CIE
Topic	Algebra and graphs
Sub-Topic	Functions
Paper	Paper 2
Difficulty	Easy
Booklet	Question Paper 4

Time allowed: **32 minutes**

Score: **/25**

Percentage: **/100**

Grade Boundaries:

CIE IGCSE Maths (0580)

A*	A	B	C	D	E
>88%	76%	63%	51%	40%	30%

CIE IGCSE Maths (0980)

9	8	7	6	5	4	3
>94%	85%	77%	67%	57%	47%	35%

Question 1

$f : x \rightarrow 2x - 7$ $\quad\quad$ $g : x \rightarrow \frac{1}{x}$

Find

(a) $fg\left(\frac{1}{2}\right)$,

[2]

(b) $gf(x)$,

[1]

(c) $f^{-1}(x)$.

[2]

Question 2

$f(x) = x^2 + 2$ $\quad$ $g(x) = (x+2)^2$ $\quad$ $h(x) = 3x - 5$

Find

(a) gf(–2),

[2]

(b) $h^{-1}(22)$.

[2]

Question 3

$f(x) = 4x + 1$ $\quad$ $g(x) = x^3 + 1$ $\quad$ $h(x) = \frac{2x+1}{3}$

(a) Find the value of gf(0).

[2]

(b) Find fg(x). Simplify your answer.

[2]

(c) Find $h^{-1}(x)$.

[2]

Question 4

$f(x) = \cos x°, \quad g(x) = 2x + 4.$

Find

(a) f(60), [1]

(b) fg(88), [2]

(c) $g^{-1}(f(x))$. [2]

$f(x) = x^3 - 3x^2 + 6x - 4$ and $g(x) = 2x - 1$.

Find

(a) $f(-1)$, [1]

(b) $gf(x)$, [2]

(c) $g^{-1}(x)$. [2]