



EXAM PAPERS PRACTICE

GCSE Edexcel Math
1MA1
Functions

Question Paper

*"We will help you to
achieve A Star "*



Question 1

f and g are functions such that

$$f(x) = \frac{2}{x^2} \quad \text{and} \quad g(x) = 4x^3$$

(a) Find $f(-5)$

[1 mark]

Question 2

$$f(x) = 3x^2 - 2x - 8$$

Express $f(x + 2)$ in the form $ax^2 + bx$

[3 marks]



Question 3

- (b) Find $gf(x)$
Simplify your answer.

[2 marks]

Question 4

g is a function such that

$$g(x) = \sqrt{x-1} \quad x \geq 1$$

- (b) Find $fg(x)$
Give your answer as simply as possible.

[2 marks]



Question 5

(b) Express the inverse function f^{-1} in the form $f^{-1}(x) = \dots$

[2 marks]

Question 6

(d) Express the function gf in the form $gf(x) = \dots$
Give your answer as simply as possible.

[2 marks]



Question 7

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

[2 marks]

Question 8

(d) (i) Find $gf(x)$
Give your answer as simply as possible.

(ii) Solve $gf(x) = 0$

[5 marks]



Question 9

The function f is such that

$$f(x) = 4x - 1$$

(a) Find $f^{-1}(x)$

[2 marks]

Question 10

The functions f and g are such that

$$f(x) = 3(x - 4) \quad \text{and} \quad g(x) = \frac{x}{5} + 1$$

(a) Find the value of $f(10)$

[1 mark]

Question 11

(c) Show that $ff(x) = 9x - 48$

[2 marks]



Question 12

(b) Solve $gf(a) = 3$

[3 marks]

Question 13

$$f(x) = \sqrt{x-6}$$

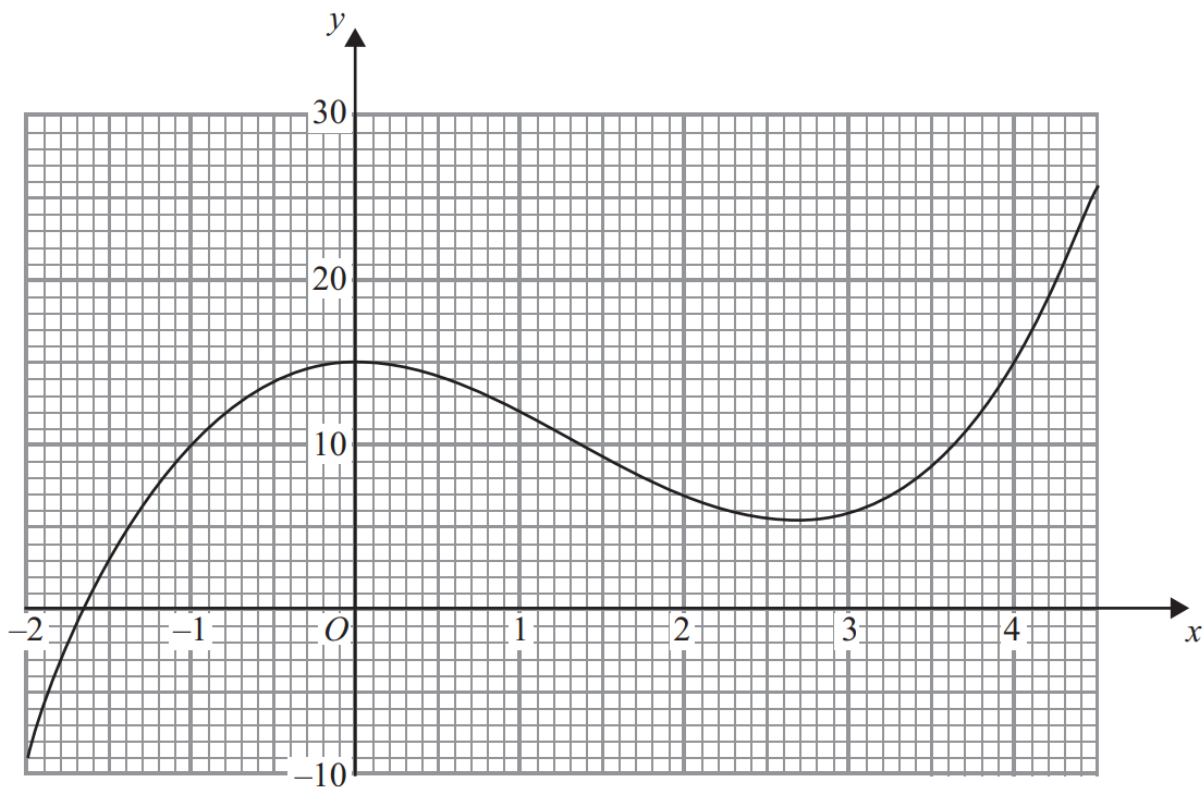
(a) Find $f(10)$

...
[1 mark]



Question 14

The diagram shows part of the graph of $y = g(x)$



(c) Find $g(2)$

[1 mark]

Question 15

(e) One of the solutions of $g(x) = k$, where k is a number, is $x = 1$

Find the other solutions.

Give your answers correct to 1 decimal place.

[3 marks]