



Inverse Functions



SCAN ME

REVISE THIS TOPIC

CHECK YOUR ANSWERS

SCAN ME

1 $f(x) = 2x + 9$

$g(x) = \sqrt{x - 3}$

$h(x) = x^3 + 4$



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

$f^{-1}(x) = \dots\dots\dots$
(2)

(b) Find $g^{-1}(x)$

$g^{-1}(x) = \dots\dots\dots$
(2)

(c) Find $h^{-1}(31)$

$\dots\dots\dots$
(2)

(Total for Question 1 is 6 marks)



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

$g(x) = x^2 - 6$



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

$f^{-1}(x) = \dots\dots\dots$
(2)

(b) Find $g^{-1}(x)$

$g^{-1}(x) = \dots\dots\dots$
(2)

(Total for Question 2 is 4 marks)

3 $f(x) = 50 - x^2$

$g(x) = 4x^2 - 1$



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

$\dots\dots\dots$
(2)

(b) Find $g^{-1}(0)$

$\dots\dots\dots$
(2)

(Total for Question 3 is 4 marks)



4 $f(x) = \frac{2x^3}{5}$

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



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

$f^{-1}(x) = \dots\dots\dots$
(2)

(b) Find $g^{-1}(x)$

$g^{-1}(x) = \dots\dots\dots$
(2)

(Total for Question 4 is 4 marks)

5 $f(x) = \sqrt[3]{100 - x}$

$g(x) = 2(x + 14)$



(a) Find $f^{-1}(4)$

$\dots\dots\dots$
(2)

(b) Find $g^{-1}(26)$

$\dots\dots\dots$
(2)

(Total for Question 5 is 4 marks)



6 $f(x) = \frac{5}{x+10}$

$g(x) = \sqrt{2x^3 - 3}$



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

$f^{-1}(x) = \dots\dots\dots$
(2)

(b) Find $g^{-1}(x)$

$g^{-1}(x) = \dots\dots\dots$
(2)

(Total for Question 6 is 4 marks)

7 $f(x) = 3 - \frac{2}{x}$

$g(x) = (x - 5)^3$



(a) Find $f^{-1}(2.5)$

$\dots\dots\dots$
(2)

(b) Find $g^{-1}(-27)$

$\dots\dots\dots$
(2)

(Total for Question 7 is 4 marks)



8 $f(x) = \frac{x+4}{x-3}$

$g(x) = \sqrt{3x}$

$h(x) = 2x + 1$



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

$f^{-1}(x) = \dots\dots\dots$
(3)

(b) Find $g^{-1}(9)$

$\dots\dots\dots$
(2)

(c) Find $(gh)^{-1}(x)$

$(gh)^{-1}(x) = \dots\dots\dots$
(4)

(Total for Question 8 is 9 marks)

