



1. f(x) = 2x + 1

(a) Find f(3)(b) Find f(-2)

2.
$$f(x) = 3x^2 + 10$$

(a) Find f(2)(b) Find f(-1)

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Composite functions

 $(f \circ g)(x) = f(g(x))$

1.
$$f(x) = 3x$$
 and $g(x) = 2x + 1$. Find $(f \circ g)(x)$.

2. f(x) = 2x + 1 and $g(x) = 3x^2$. Find $(g \circ f)(x)$.

Exercise

Paper 1

1. (a) Let
$$f(x) = 2x - 1$$
 and $g(x) = 3x^2 + 2$.

(a) Find $f^{-1}(x)$. (b) Find $(f \circ g)(1)$.







2. ⓐ Let
$$f(x) = (x - 5)^3$$
, for x ∈ ℝ.

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

(b) Let g be a function so that $(f \circ g)(x) = 8x^6$. Find g(x).





Paper 2

1. Let f(x) = 3x, g(x) = 2x - 5 and $h(x) = (f \circ g)(x)$. (a) Find h(x). (b) Find $h^{-1}(x)$.



2. Let
$$f(x) = 2x + 4$$
 and $g(x) = 7x^2$.

(a) Find f⁻¹(x).
(b) Find (f ∘ g)(x).
(c) Find (f ∘ g)(3.5).

