

Evaluating Composition of Functions

A) 1) If $f(x) = -5x^3 - 12$, $g(x) = \frac{1}{x-9}$ and $h(x) = 9x + 6$, evaluate the following.

a) $f(g(7))$

b) $g(h(0))$

2) If $f(x) = 4x^4 - x + 10$, $g(x) = x^2 - 1$ and $h(x) = x + 12$, evaluate the following.

a) $(f \circ g)(-1)$

b) $(h \circ h)(10)$

3) If $f(x) = 7^x$ and $h(x) = \log_7 x$, evaluate the following.

a) $(h \circ f)(8)$

b) $(f \circ h)(8)$

B) 1) If $f(x) = \frac{x}{6}$ and $g(x) = 14 - x$, which of the following represents $g(f(-6))$?

i) 13

ii) 15

iii) -15

iv) -13

2) If $g(x) = 2$ and $h(x) = 10x - 12$, which of the following represents $(h \circ g)(11)$?

i) 8

ii) -32

iii) 32

iv) -8