

Composition of Two Functions

A) If $f(x) = 5x^4 - 10x - 8$, $g(x) = -x + 1$ and $h(x) = -2x$, find the following.

1) $h(h(k + 7))$

2) $g(f(-u))$

B) If $f(x) = x - 7$, $g(x) = x^2 - 6x + 13$ and $h(x) = -4$, find the following.

1) $(f \circ g)(m)$

C) If $f(x) = e^{2x}$ and $g(x) =$

1) $(f \circ g)(z)$

3) Is $(f \circ g)(z) \neq (g \circ f)(z)$?

D) 1) If $f(x) = 9$ and $g(x) = \log_9 x$, which of the following represents $g(f(9 - v))$?

i) -1

ii) 9

iii) 1

iv) -9

2) If $g(x) = 2x + 14$ and $h(x) = \frac{6}{x^3}$, which of the following represents $(g \circ h)\left(-\frac{1}{p}\right)$?

i) $-6p^3 + 14$

ii) $-12p^3 + 14$

iii) $6p^3 - 14$

iv) $12p^3 - 14$

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Composition of Two Functions

A) If $f(x) = 5x^4 - 10x - 8$, $g(x) = -x + 1$ and $h(x) = -2x$, find the following.

1) $h(h(k + 7))$

2) $g(f(-u))$

 $4k + 28$

 $-5u^4 - 10u + 9$

B) If $f(x) = x - 7$, $g(x) = x^2 - 6x + 13$ and $h(x) = -4$, find the following.

1) $(f \circ g)(m)$

 $m^2 - 6m$

 -4

C) If $f(x) = e^{2x}$ and $g(x) = e^{6x}$, find the following.

1) $(f \circ g)(z)$

 e^{6z}

 e^{2z}

3) Is $(f \circ g)(z) \neq (g \circ f)(z)$?

 True

D) 1) If $f(x) = 9$ and $g(x) = \log_9 x$, which of the following represents $g(f(9 - v))$?

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