

Name : _____

Function Operations

Mul/Div: ES2

A) 1) If $f(x) = 7x^2 + x$ and $g(x) = -4x^3 - x$,
find $(f \cdot g)(x)$.

2) If $f(x) = x + 2$ and $g(x) = x^2 - x - 6$,
find $\frac{g(x)}{f(x)}$.

B) If $f(x) = 15$ and $g(x) = 3x - 12$; find the following.

i) $\left(\frac{f}{g}\right)(x)$

ii) $g(x) \cdot f(x)$

C) 1) If $f(x) = -8 - x^2$ and $g(x) = -6x - 2$,
find $f(-4) \cdot g(-4)$.

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D) If $f(x) = x^2 - 13$ and $g(x) = 3x - 12$,
find $\frac{f(3)}{g(3)}$

i) $\frac{f(3)}{g(3)}$

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E) 1) Which of the following represents $\frac{f(x)}{g(x)}$, if $f(x) = x^2 + 5x$ and $g(x) = 2x^2 + 10$?

i) 2

ii) 6

iii) 4

iv) 3

2) Which of the following represents $(f \cdot g)(x)$, if $f(x) = -11$ and $g(x) = 3 + x^2$?

i) $33x^2 + 11$

ii) $11x^2 - 3$

iii) $-11x^2 - 33$

iv) $-3x^2 + 11$

Function Operations

A) 1) If $f(x) = 7x^2 + x$ and $g(x) = -4x^3 - x$,
find $(f \cdot g)(x)$.

$$\underline{-28x^5 - 4x^4 - 7x^3 - x^2}$$

2) If $f(x) = x + 2$ and $g(x) = x^2 - x - 6$,
find $\frac{g(x)}{f(x)}$.

$$\underline{x - 3}$$

B) If $f(x) = 15$ and $g(x) = 3x - 12$; find the following.

i) $\left(\frac{f}{g}\right)(x)$

$$\underline{\frac{5}{x - 4}}$$

ii) $g(x) \cdot f(x)$

$$\underline{180}$$

C) 1) If $f(x) = -8 - x^2$ and $g(x) = -6x - 2$,
find $f(-4) \cdot g(-4)$.

$$\underline{768}$$

D) If $f(x) = x^2 - 13$ and $g(x) = 3x - 2$,
find $\frac{f(3)}{g(3)}$.

i) $\frac{f(3)}{g(3)}$

$$\underline{-\frac{4}{21}}$$

$$\underline{\frac{0}{3}}$$

$$\underline{56}$$

E) 1) Which of the following represents $\frac{f(x)}{f(1)}$, if $f(x) = x^2 + 5x$ and $g(x) = 2x^2 + 10$?

i) 2

ii) 6

iii) 4

iv) 3

2) Which of the following represents $(f \cdot g)(x)$, if $f(x) = -11$ and $g(x) = 3 + x^2$?

i) $33x^2 + 11$

ii) $11x^2 - 3$

iii) $-11x^2 - 33$

iv) $-3x^2 + 11$

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