

Name : _____

Function Operations

ES1

A) 1) If $f(x) = 4x + 7$ and $g(x) = x^2 + 6$,
find $(f \cdot g)(x)$.

2) If $f(x) = 5x^2 - 13$ and $g(x) = 8x^3 + 4$,
find $(f + g)(x)$.

B) If $f(x) = 9x^2 - 9x$ and $g(x) = -3x$; find the following.

i) $g(x) - f(x)$

ii) $\frac{f(x)}{g(x)}$

C) 1) If $f(x) = -5x^3$ and $g(x) = x^2 + x + 10$,
find $(g \cdot f)(-2)$.

2) If $f(x) = 7x^2 - 2x$ and $g(x) = x^3 + 1$,
find $(f - g)(6)$.

D) If $f(x) = -6x - 12$ and $g(x) = -9x^2 - 3x$; find the following.

i) $f(-3) + g(-3)$

ii) $\frac{g(1)}{f(1)}$

E) 1) Which of the following represents $(f \cdot g)(x)$, if $f(x) = -2x + 11$ and $g(x) = 8$?

i) $-2x + 88$

ii) $-16x + 11$

iii) $-16x + 88$

iv) $x + 11$

2) Which of the following represents $(g - f)(10)$, if $f(x) = 4x^2 - 1$ and $g(x) = x - x^2$?

i) -489

ii) -511

iii) 489

iv) 511

Function Operations

A) 1) If $f(x) = 4x + 7$ and $g(x) = x^2 + 6$,
find $(f \cdot g)(x)$.

$$\underline{4x^3 + 7x^2 + 24x + 42}$$

2) If $f(x) = 5x^2 - 13$ and $g(x) = 8x^3 + 4$,
find $(f + g)(x)$.

$$\underline{8x^3 + 5x^2 - 9}$$

B) If $f(x) = 9x^2 - 9x$ and $g(x) = -3x$; find the following.

i) $g(x) - f(x)$

$$\underline{-9x^2 + 6x}$$

ii) $\frac{f(x)}{g(x)}$

$$\underline{-3x + 3}$$

C) 1) If $f(x) = -5x^3$ and $g(x) = x^2 + x + 10$,
find $(g \cdot f)(-2)$.

$$\underline{480}$$

2) If $f(x) = 7x^2 - 2x$ and $g(x) = x^3 + 1$,
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$$\underline{23}$$

D) If $f(x) = -6x - 12$ and $g(x) = -9x^2 - 3x$; find the following.

i) $f(-3) + g(-3)$

$$\underline{-66}$$

ii) $\frac{g(1)}{f(1)}$

$$\underline{\frac{2}{3}}$$

E) 1) Which of the following represents $(f \cdot g)(x)$, if $f(x) = -2x + 11$ and $g(x) = 8$?

i) $-2x + 88$

ii) $-16x + 11$

iii) $-16x + 88$

iv) $x + 11$

2) Which of the following represents $(g - f)(10)$, if $f(x) = 4x^2 - 1$ and $g(x) = x - x^2$?

i) -489

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iv) 511