

Name : _____

Function Operations

Mul/Div: ES1

A) 1) If $f(x) = 2x - 6$ and $g(x) = x^2 - 5x + 6$,
find $\frac{f(x)}{g(x)}$.

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

B) If $f(x) = 4x - 8$ and $g(x) = -x^2 + 6x - 8$; find the following.

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

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

C) 1) If $f(x) = 10x + 3$ and $g(x) = x + 15$,
find $\left(\frac{f}{g}\right)(6)$.

2) If $f(x) = -3x - 9$ and $g(x) = 5x^2 + 1$,
find $g(-3) \cdot f(-3)$.

D) If $f(x) = 5 - x$ and $g(x) = 12 + 7x^2$; find the following.

i) $(f \cdot g)(-2)$

ii) $\frac{g(4)}{f(4)}$

E) 1) Which of the following represents $\left(\frac{f}{g}\right)(x)$, if $f(x) = -9x^3$ and $g(x) = -3x^2$?

i) 3

ii) x

iii) $2x$

iv) $3x$

2) Which of the following represents $(g \cdot f)(5)$, if $f(x) = -13 - x^2$ and $g(x) = -14$?

i) 168

ii) 532

iii) 494

iv) 196

Name : _____

Answer key

Mul/Div: ES1

Function Operations

A) 1) If $f(x) = 2x - 6$ and $g(x) = x^2 - 5x + 6$,
find $\frac{f(x)}{g(x)}$.

$$\frac{2}{x-2}$$

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

$$-7x^4 - 5x^3 + 2x^2$$

B) If $f(x) = 4x - 8$ and $g(x) = -x^2 + 6x - 8$; find the following.

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

$$-4x^3 + 32x^2 - 80x + 64$$

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

$$\frac{-x+4}{4}$$

C) 1) If $f(x) = 10x + 3$ and $g(x) = x + 15$,
find $\left(\frac{f}{g}\right)(6)$.

$$3$$

2) If $f(x) = -3x - 9$ and $g(x) = 5x^2 + 1$,
find $g(-3) \cdot f(-3)$.

$$0$$

D) If $f(x) = 5 - x$ and $g(x) = 12 + 7x^2$; find the following.

i) $(f \cdot g)(-2)$

$$280$$

ii) $\frac{g(4)}{f(4)}$

$$124$$

E) 1) Which of the following represents $\left(\frac{f}{g}\right)(x)$, if $f(x) = -9x^3$ and $g(x) = -3x^2$?

i) 3

ii) x

iii) $2x$

iv) $3x$

2) Which of the following represents $(g \cdot f)(5)$, if $f(x) = -13 - x^2$ and $g(x) = -14$?

i) 168

ii) 532

iii) 494

iv) 196