

Name : _____

Function Operations

Mul/Div: MS2

A) 1) If $f(x) = \frac{1}{7}x^2 - 7$ and $g(x) = \frac{1}{7}x - 1$,
find $\left(\frac{f}{g}\right)(x)$.

2) If $f(x) = 4x + 8$ and $g(x) = \frac{1}{4}x^3 - 3x^2$,
find $(g \cdot f)(x)$.

B) If $f(x) = -x$ and $g(x) = \frac{5}{2}x^2 + 3x$; find the following.

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

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

C) 1) If $f(x) = x^2 + 2x + 1$ and
find $(g \cdot f)\left(-\frac{1}{2}\right)$.

and $g(x) = 15$,

D) If $f(x) = 3x - 1$ and $g(x) =$

i) $\frac{f(-1)}{g(-1)}$

E) 1) Which of the following represents $\frac{g(f(x))}{f(3)}$, if $f(x) = \frac{x}{9}$ and $g(x) = 10x^2 - 12$?

i) 366

ii) 297

iii) 351

iv) 405

2) Which of the following represents $(f \cdot g)(x)$, if $f(x) = 6x^3 - 2$ and $g(x) = \frac{5}{6}x$?

i) $5x^4 - x$

ii) $5x^4 - 7x + \frac{1}{3}$

iii) $5x^4 + \frac{5}{3}x - 10$

iv) $5x^4 - \frac{5}{3}x$