

Name : _____

Function Operations

Mul/Div: MS3

A) 1) If $f(x) = \frac{2}{5}x^3 + 4x$ and $g(x) = 5x^2 - 10$,
find $(f \cdot g)(x)$.

2) If $f(x) = 5$ and $g(x) = \frac{5}{6}x^3 + 15$,
find $\left(\frac{g}{f}\right)(x)$.

B) If $f(x) = x^2 - 8x$ and $g(x) = \frac{1}{2}x$; find the following.

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

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

C) 1) If $f(x) = 3$ and $g(x) =$
find $\frac{g(-7)}{f(-7)}$.

and $g(x) = 6x^3 + 2$,

D) If $f(x) = 8x^2$ and $g(x) =$

i) $g\left(\frac{1}{4}\right) \cdot f\left(\frac{1}{4}\right)$

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

i) $x^4 - 9x^2 + 9x$

ii) $x^4 - 6x^3 + \frac{1}{9}$

iii) $x^4 + 3x^2 + 3x$

iv) $x^4 + \frac{1}{9}x^3 - 9x^2 - x$

2) Which of the following represents $\frac{f(-8)}{g(-8)}$, if $f(x) = \frac{3}{4}x^2 - 8$ and $g(x) = 5x$?

i) -1

ii) 1

iii) 4

iv) -4

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Function Operations

A) 1) If $f(x) = \frac{2}{5}x^3 + 4x$ and $g(x) = 5x^2 - 10$,
find $(f \cdot g)(x)$.

$$\underline{2x^5 + 16x^3 - 40x}$$

2) If $f(x) = 5$ and $g(x) = \frac{5}{6}x^3 + 15$,
find $\left(\frac{g}{f}\right)(x)$.

$$\underline{\frac{1}{6}x^3 + 3}$$

B) If $f(x) = x^2 - 8x$ and $g(x) = \frac{1}{2}x$; find the following.

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

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

$$\underline{2x - 16}$$

PREVIEW

$$\underline{-4x^2}$$

C) 1) If $f(x) = 3$ and $g(x) =$
find $\frac{g(-7)}{f(-7)}$.

$$\underline{-3}$$

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D) If $f(x) = 8x^2$ and $g(x) =$

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$$\underline{-\frac{3}{8}}$$

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

i) $x^4 - 9x^2 + 9x$

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iv) $x^4 + \frac{1}{9}x^3 - 9x^2 - x$

2) Which of the following represents $\frac{f(-8)}{g(-8)}$, if $f(x) = \frac{3}{4}x^2 - 8$ and $g(x) = 5x$?

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