Name : _____

Function Operations

A) 1) If $f(x) = 7x + 5$ and $g(x) = 2x^2 - 5$,
find $f(x) + g(x)$.

_____

2) If $f(x) = 6x^2 + 3$ and $g(x) = 4$,
find $(g - f)(x)$.

_____

B) If $f(x) = -3x^2 + 13$ and $g(x) = x^3 + 8x^2 - 2$; find the following.
   i) $(g + f)(x)$

   ii) $f(x) - g(x)$

_____

C) 1) If $f(x) = -9$ and $g(x) = -10 + x$,
find $(g - f)(-7)$.

_____

2) If $f(x) = -2x - 14$ and $g(x) = 5x + x^2$,
find $f(6) + g(6)$.

_____

D) If $f(x) = -4x + 15$ and $g(x) = 7x^3$; find the following.
   i) $g(-3) + f(-3)$

   ii) $(f - g)(2)$

_____   _____

E) 1) Which of the following represents $(g + f)(10)$, if $f(x) = x^2 + 1$ and $g(x) = -x^2 - 9x$?

   i) 89   ii) −89   iii) −91   iv) 91

2) Which of the following represents $f(x) - g(x)$, if $f(x) = -11 + x$ and $g(x) = 8x^2 + 3x - 12$?

   i) $-8x^2 - 2x + 23$ ii) $8x^2 + 4x - 1$ iii) $8x^2 + 4x - 23$ iv) $-8x^2 - 2x + 1$