

For the given $f(x)$ and $g(x)$, find the **operation** or **composition** of functions listed, the **domain**, and the corresponding **values**.

1) **Given:** $f(x) = 2x + 3$ and $g(x) = 4x^2 - 7$

$(f + g)(x) =$ _____

$(f + g)(2)$

Answer: _____

Domain: _____

2) **Given:** $f(x) = 2x + 3$ and $g(x) = 4x^2 - 7$

$(f - g)(x) =$ _____

$(f - g)(0)$

Answer: _____

Domain: _____

3) **Given:** $f(x) = x^2$ and $g(x) = 1 - x$

$(f \cdot g)(x) =$ _____

$(f \cdot g)(-1)$

Answer: _____

Domain: _____

4) **Given:** $f(x) = x^2$ and $g(x) = 1 - x$

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

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

$\left(\frac{f}{g}\right)(-3)$

Answer: _____

Domain: _____

For the given $f(x)$ and $g(x)$, find the **operation** or **composition** of functions listed, the **domain**, and the corresponding **values**.

5) **Given:** $f(x) = x^2 + 2$ and $g(x) = x - 5$

$(f + g)(x) =$

$(f + g)(0)$

Answer: _____

Domain: _____

6) **Given:** $f(x) = x^2 + 2$ and $g(x) = x - 5$

$(f - g)(x) =$

$(f - g)(-3)$

Answer: _____

Domain: _____

7) **Given:** $f(x) = -4x + 1$ and $g(x) = 3x + 3$

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

$(f \cdot g)(1)$

Answer: _____

Domain: _____

8) **Given:** $f(x) = -4x + 1$ and $g(x) = 3x + 3$

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

$\left(\frac{f}{g}\right)(-2)$

$\left(\frac{f}{g}\right)(-1)$

Answer: _____

Domain: _____