

1. Find the equation of the line parallel to $2x - \frac{3}{5}y + 7 = 0$ passing through the point $(-3, 4)$.

2. Suppose $f(x) = 3x^2 + x$ and $g(x) = 4x - 1$. Find

(a) $f(3)$

(b) $g(-5)$

(c) $f(a)$

(d) $f(a + x)$

(e) $\frac{f(a+h)-f(a)}{h}$

(f) $(f + g)(x)$

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

(h) What is the domain of $\left(\frac{f}{g}\right)(x)$?

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

(j) What is the domain of $\left(\frac{g}{f}\right)(x)$?

(k) $f \circ g(x)$

(l) $g \circ f(x)$

3. Solve $2 \csc(x) \sin(x) = -\sqrt{3} \csc(x)$ if $0 \leq x < 2\pi$.