



Evaluating Functions

Name _____

Score _____

EF:18

Evaluate each function.

$$1) f(x) = \begin{cases} x^2 + x + 4 & ; -10 < x < 4 \\ \frac{x+3}{3} & ; x < -11 \\ 5x - 6 & ; x \geq 4 \end{cases}$$

$f(-1) = \underline{\hspace{2cm}} \quad f(8) = \underline{\hspace{2cm}}$

$f(-12) = \underline{\hspace{2cm}} \quad f(2) = \underline{\hspace{2cm}}$

$2f(5) + f(-9) = \underline{\hspace{4cm}}$

$$3) f(x) = \begin{cases} 5x & ; -1 < x < 8 \\ x^2 + 1 & ; x > 8 \\ x^3 - x - 2 & ; x < -3 \end{cases}$$

$f(7) = \underline{\hspace{2cm}} \quad f(-4) = \underline{\hspace{2cm}}$

$f(11) = \underline{\hspace{2cm}} \quad f(0) = \underline{\hspace{2cm}}$

$f(9) - 3f(2) = \underline{\hspace{4cm}}$

$$5) f(x) = \begin{cases} x + 4 & ; x \leq -6 \\ 3x^2 & ; -6 < x \leq 2 \\ 5(x - 1) & ; x > 3 \end{cases}$$

$f(-3) = \underline{\hspace{2cm}} \quad f(18) = \underline{\hspace{2cm}}$

$f(-5) = \underline{\hspace{2cm}} \quad f(1) = \underline{\hspace{2cm}}$

$5f(-4) \div f(4) = \underline{\hspace{4cm}}$

$$2) f(x) = \begin{cases} 2(x - 1) & ; x \leq 1 \\ x(x + 2) & ; x > 9 \\ -3x^3 & ; 2 < x \leq 5 \end{cases}$$

$f(-6) = \underline{\hspace{2cm}} \quad f(-10) = \underline{\hspace{2cm}}$

$f(15) = \underline{\hspace{2cm}} \quad f(4) = \underline{\hspace{2cm}}$

$f(3) \div f(-2) = \underline{\hspace{4cm}}$

$$4) f(x) = \begin{cases} x^3 + 2 & ; x \geq -5 \\ \frac{x}{4} - 5 & ; x = -6 \\ x^2 - 2x + 1 & ; -11 \leq x \leq -7 \end{cases}$$

$f(-11) = \underline{\hspace{2cm}} \quad f(-2) = \underline{\hspace{2cm}}$

$f(2) = \underline{\hspace{2cm}} \quad f(-7) = \underline{\hspace{2cm}}$

$f(-6) \times f(-1) = \underline{\hspace{4cm}}$

$$6) f(x) = \begin{cases} x^2(x - 2) & ; 3 < x < 8 \\ -7x & ; x > 11 \\ 4x - 11 & ; x < 1 \end{cases}$$

$f(6) = \underline{\hspace{2cm}} \quad f(-1) = \underline{\hspace{2cm}}$

$f(-8) = \underline{\hspace{2cm}} \quad f(14) = \underline{\hspace{2cm}}$

$4f(12) + 2f(-6) = \underline{\hspace{4cm}}$



Evaluating Functions

Name _____

Score _____

Answer key

EF:18

Evaluate each function.

$$1) f(x) = \begin{cases} x^2 + x + 4 & ; -10 < x < 4 \\ \frac{x+3}{3} & ; x < -11 \\ 5x - 6 & ; x \geq 4 \end{cases}$$

$f(-1) = \underline{4} \quad f(8) = \underline{34}$

$f(-12) = \underline{-3} \quad f(2) = \underline{10}$

$2f(5) + f(-9) = \underline{95}$

$$3) f(x) = \begin{cases} 5x & ; -1 < x < 8 \\ x^2 + 1 & ; x > 8 \\ x^3 - x - 2 & ; x < -3 \end{cases}$$

$f(7) = \underline{35} \quad f(-4) = \underline{-62}$

$f(11) = \underline{122} \quad f(0) = \underline{0}$

$f(9) - 3f(2) = \underline{52}$

$$5) f(x) = \begin{cases} x + 4 & ; x \leq -6 \\ 3x^2 & ; -6 < x \leq 2 \\ 5(x - 1) & ; x > 3 \end{cases}$$

$f(-3) = \underline{27} \quad f(18) = \underline{85}$

$f(-5) = \underline{75} \quad f(1) = \underline{0}$

$5f(-4) \div f(4) = \underline{16}$

$$2) f(x) = \begin{cases} 2(x - 1) & ; x \leq 1 \\ x(x + 2) & ; x > 9 \\ -3x^3 & ; 2 < x \leq 5 \end{cases}$$

$f(-6) = \underline{-14} \quad f(-10) = \underline{-22}$

$f(15) = \underline{255} \quad f(4) = \underline{-192}$

$f(3) \div f(-2) = \underline{-\frac{27}{2}}$

$$4) f(x) = \begin{cases} x^3 + 2 & ; x \geq -5 \\ \frac{x}{4} - 5 & ; x = -6 \\ x^2 - 2x + 1 & ; -11 \leq x \leq -7 \end{cases}$$

$f(-11) = \underline{144} \quad f(-2) = \underline{-6}$

$f(2) = \underline{10} \quad f(-7) = \underline{64}$

$f(-6) \times f(-1) = \underline{-\frac{27}{2}}$

$$6) f(x) = \begin{cases} x^2(x - 2) & ; 3 < x < 8 \\ -7x & ; x > 11 \\ 4x - 11 & ; x < 1 \end{cases}$$

$f(6) = \underline{144} \quad f(-1) = \underline{-15}$

$f(-8) = \underline{-43} \quad f(14) = \underline{-98}$

$4f(12) + 2f(-6) = \underline{-371}$