

Evaluating Piecewise Functions

A) Evaluate each function.

$$1) f(x) = \begin{cases} 25 & , x \leq 0 \\ x^2 - 2 & , x > 0 \end{cases}$$

$$2) f(x) = \begin{cases} -x^2 - 1 & , -10 \leq x \leq 0 \\ 5x & , 0 < x \leq 10 \end{cases}$$

i) $f(-12) =$ _____

i) $f(0) =$ _____

ii) $f(10) =$ _____

ii) $f(8) =$ _____

$$3) f(x) = \begin{cases} x - 4 & , -13 \leq x \leq 0 \\ 1 - 7x & , 0 < x \leq 13 \end{cases}$$

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i) $f(17) =$ _____

ii) $f(-9) =$ _____

B) If $f(x) = \begin{cases} 6x + 1 & , -2 \leq x \leq 6 \\ 2x^2 & , -6 \leq x < -2 \end{cases}$

1) $-f(-3) \times f(3) =$ _____

3) $\frac{4f(7)}{f(2)} =$ _____

4) $9f(-1) - f(-20) =$ _____

C) If $f(x) = \begin{cases} \frac{10}{x} - 7 & , x \neq 0 \\ -18 & , x = 0 \end{cases}$; what is the value of $f(-5)$?

i) 3

ii) -18

iii) 12

iv) -9

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A) Evaluate each function.

$$1) f(x) = \begin{cases} 25 & , x \leq 0 \\ x^2 - 2 & , x > 0 \end{cases}$$

$$2) f(x) = \begin{cases} -x^2 - 1 & , -10 \leq x \leq 0 \\ 5x & , 0 < x \leq 10 \end{cases}$$

i) $f(-12) =$ 25

i) $f(0) =$ -1

ii) $f(10) =$ 98

ii) $f(8) =$ 40

$$3) f(x) = \begin{cases} x - 4 & , -13 \leq x \leq 0 \\ 1 - 7x & , 0 < x \leq 13 \end{cases}$$

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i) $f(17) =$ -1

5

ii) $f(-9) =$ -

121

B) If $f(x) = \begin{cases} 6x + 1 & , -2 \leq x \leq 3 \\ 2x^2 & , -6 \leq x < -2 \end{cases}$

1) $-f(-3) \times f(3) =$

-70

3) $\frac{4f(7)}{f(2)} =$ 49

4) $9f(-1) - f(-20) =$ 137

C) If $f(x) = \begin{cases} \frac{10}{x} - 7 & , x \neq 0 \\ -18 & , x = 0 \end{cases}$

; what is the value of $f(-5)$?

i) 3

ii) -18

iii) 12

iv) -9