

Evaluating Piecewise Functions

A) Evaluate each function.

$$1) f(x) = \begin{cases} -x - 4 & , x \leq 5 \\ 2x^2 - 7 & , 5 < x \leq 10 \end{cases}$$

$$2) f(x) = \begin{cases} x^2 & , -15 \leq x \leq 0 \\ x - 5 & , 0 < x \leq 15 \end{cases}$$

i) $f(-2) =$ _____

i) $f(-5) =$ _____

ii) $f(7) =$ _____

ii) $f(15) =$ _____

$$3) f(x) = \begin{cases} \frac{6}{x} - 1 & , x \leq 0 \\ 3 & , 0 < x < \infty \end{cases}$$

PREVIEW

, $x \leq 0$

, $0 < x < \infty$

i) $f(3) =$ _____

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ii) $f(0) =$ _____

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B) If $f(x) = \begin{cases} x + 2 & , x \leq -7 \\ 8x & , -7 < x \leq 0 \end{cases}$

1) $\frac{7f(6)}{4f(-9)} =$ _____

3) $-9f(-7) + f(0) =$ _____

4) $f(-1) \times 2f(2) =$ _____

C) If $f(x) = \begin{cases} (x + 4)^2 & , -20 \leq x \leq 0 \\ 3x^2 - x & , 0 < x \leq 20 \end{cases}$; what is the value of $f(-11)$?

i) 132

ii) -110

iii) 49

iv) -81