Evaluating Piecewise Functions Worksheets

Name: _____ **Date:** _____

Direction: The first step in evaluating a piecewise function is to determine which function definition applies depending on the value of x that is being input. Evaluate each function.

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

i) $f(-2)$ = _____

ii) $f(7)$ = _____

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

i) $f(-5)$ = _____

ii) $f(15)$ = _____

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

i) $f(3)$ = _____

ii) $f(0)$ = _____

4) $f(x) = \begin{cases} 14 & , \ x \le 0 \\ x^2 - 9x & , \ 0 < x < \infty \end{cases}$

i) $f(-5)$ = _____

ii) $f(1)$ = _____

Evaluating Piecewise Functions Worksheets

Name: _____ **Date:** _____

ANSWER KEY

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

i) $f(-2)$ = **−2**

ii) $f(7)$ = **91**

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

i) $f(-5)$ = **25**

ii) $f(15)$ = **10**

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

i) $f(3)$ = **1**

ii) $f(0)$ = **3**

4) $f(x) = \begin{cases} 14 & , \ x \le 0 \\ x^2 - 9x & , \ 0 < x < \infty \end{cases}$

i) $f(-5)$ = **14**

ii) $f(1)$ = **−8**