

Piecewise Functions ASSIGNMENT

NAME: _____

Evaluate the following.

$$f(x) = \begin{cases} x^2 + 6x + 7 & \text{if } x < -1 \\ -x + 3 & \text{if } -1 \leq x < 3 \\ 5 & \text{if } x \geq 3 \end{cases}$$

$$g(x) = \begin{cases} -5, & x \leq -2 \\ \frac{1}{2}x, & -2 < x \leq 4 \\ x - 4, & x > 4 \end{cases}$$

$f(2) =$

$g(7) =$

$f(-1) =$

$g(4) =$

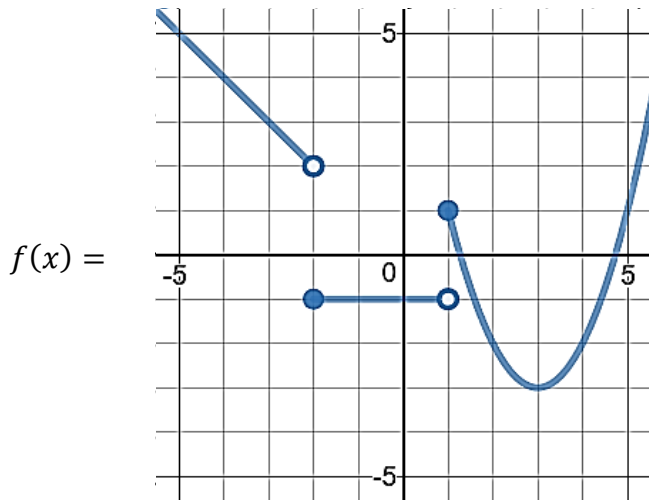
$f(-7) =$

$g(-28) =$

$f(3) =$

$g(-2) =$

Use the graphs of the piecewise functions below to evaluate the following:

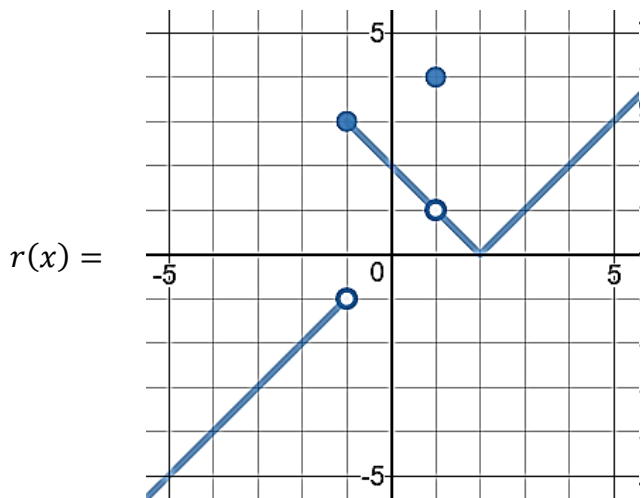


$f(-4) =$

$f(-2) =$

$f(1) =$

$f(3) =$



$r(-3) =$

$r(-1) =$

$r(1) =$

$r(2) =$

$r(5) =$

The function used to determine the weekly earnings of an employee at Jack's Burger Palace is given by $f(x)$, where x is the number of hours worked.

$$f(x) = \begin{cases} 12x & 0 \leq x \leq 40 \\ 18(x - 40) + 480 & x > 40 \end{cases}$$

Determine the difference in earnings for an employee who works 55 hours versus one who works 36 hours.

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Graph the following piecewise functions.

$$f(x) = \begin{cases} x + 2 & x \leq -2 \\ -x + 3 & x > -2 \end{cases}$$

$$t(x) = \begin{cases} -\frac{1}{2}x - 3 & \text{if } x < 2 \\ -1 & \text{if } x \geq 2 \end{cases}$$

