

# H.W.3.P.11

## Piecewise Functions

NAME: \_\_\_\_\_

1. Use the piecewise function to evaluate the following.

$$f(x) = \begin{cases} \frac{3}{x-2}, & x < -3 \\ 2x^2 - 3x, & -3 < x \leq 6 \\ 8, & x > 6 \end{cases}$$

a.  $f(-1) =$

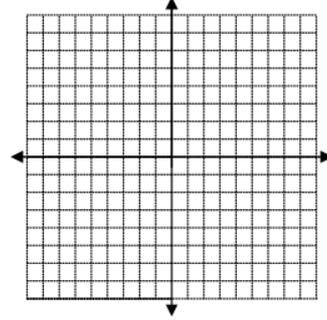
b.  $f(-4) =$

c.  $f(9) =$

d.  $f(6) =$

2. Graph the following piecewise function.

$$f(x) = \begin{cases} -\frac{1}{3}x - 2, & x \leq 0 \\ \frac{1}{2}x + 1, & x > 0 \end{cases}$$



3.

$$f(x) = \begin{cases} \frac{3}{x+4}, & x < -5 \\ x^2 - 3x, & -5 < x \leq 0 \\ x^4 - 7, & x > 0 \end{cases}$$

a.  $f(-1) =$

b.  $f(4) =$

c.  $f(-10) =$

d.  $f(0) =$

4.

$$f(x) = \begin{cases} |2x + 7|, & x \leq -4 \\ 1 + x^2, & -4 < x \leq 1 \\ 6, & 1 < x < 3 \\ \frac{1}{3}x + 8, & x \geq 3 \end{cases}$$

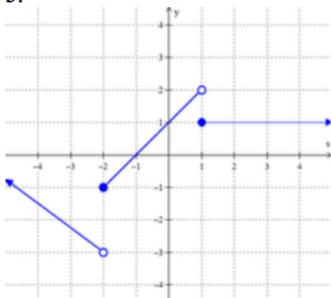
a.  $f(5) =$

b.  $f(1) =$

c.  $f(-4) =$

d.  $f(2) =$

5.



a.  $f(-1) =$

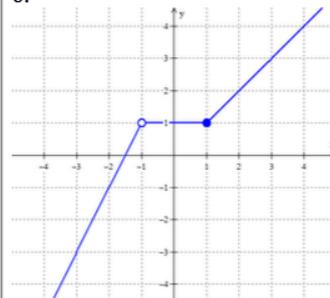
b.  $f(2) =$

c.  $f(1) =$

d.  $f(-2) =$

e.  $f(0) =$

6.



a.  $f(-3) =$

b.  $f(4) =$

c.  $f(1) =$

d.  $f(-1) =$

e.  $f(0) =$