Calculus   Name_____ ID: 1
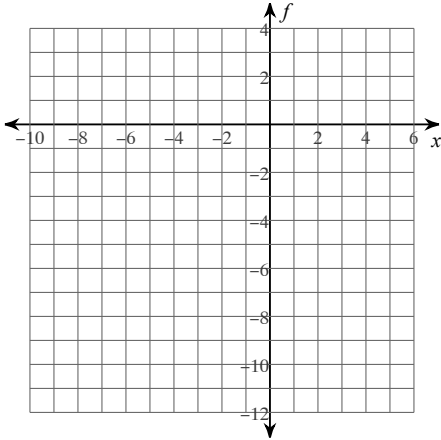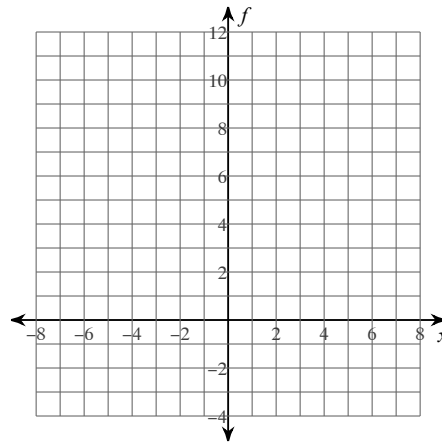
Graphing Piecewise Functions Practice

Date_____ Period_____

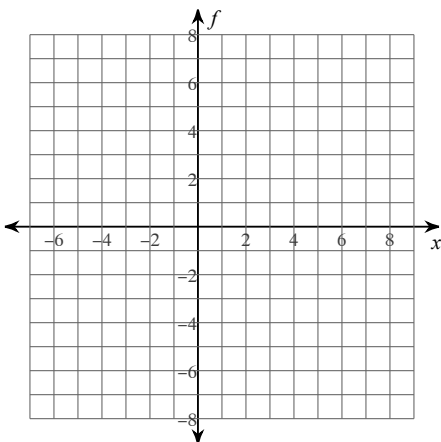**Graph each piecewise function using t-tables. Then determine its domain.**

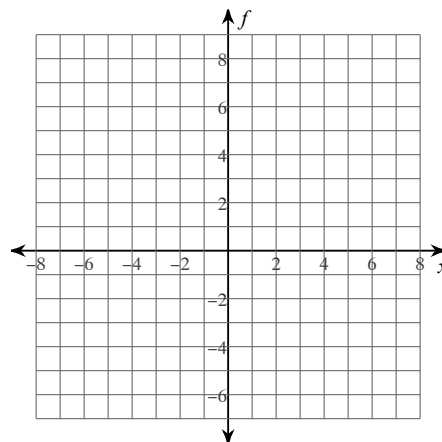1) $f(x) = \begin{cases} 2x - 2, & x \le -2 \\ -x^2 + 1, & x > -2 \end{cases}$

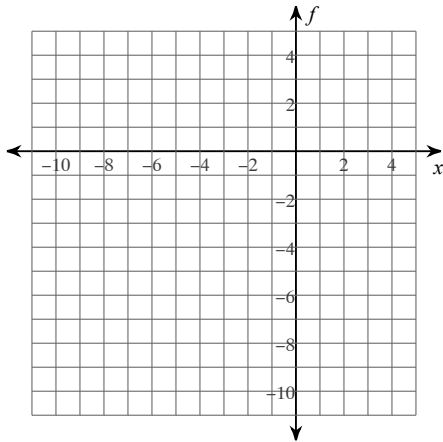2) $f(x) = \begin{cases} -2x + 8, & x \le 0 \\ \dfrac{x}{2} + \dfrac{1}{2}, & x > 0 \end{cases}$

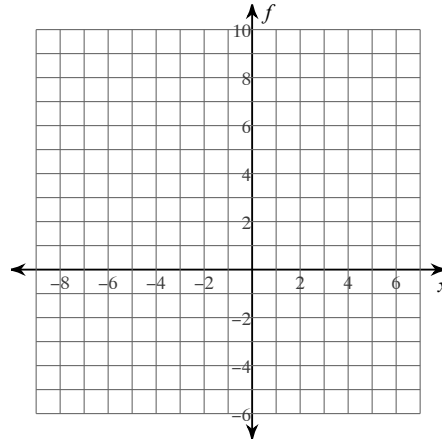3) $f(x) = \begin{cases} -1, & x \le 1 \\ x^2 - 4x + 3, & x > 1 \end{cases}$

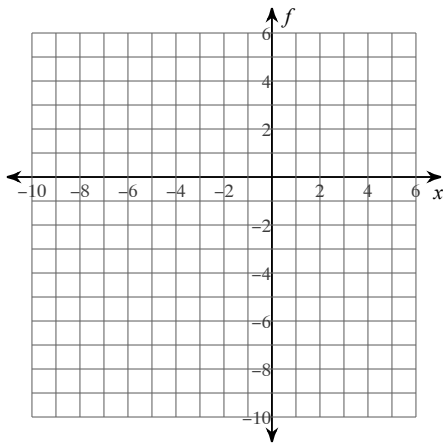4) $f(x) = \begin{cases} x + 3, & x < 0 \\ -x - 1, & x \ge 0 \end{cases}$

5) $f(x) = \begin{cases} -x^2 - 4x - 4, & x \le -3 \\ \dfrac{x}{2} - 4, & x > -3 \end{cases}$
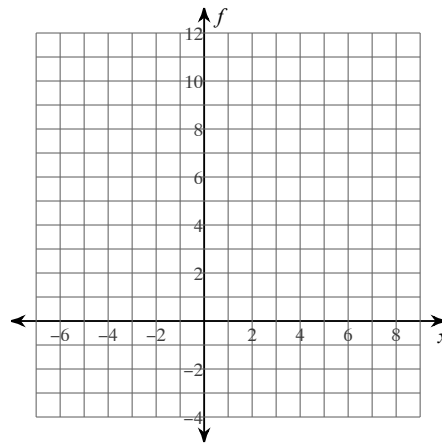
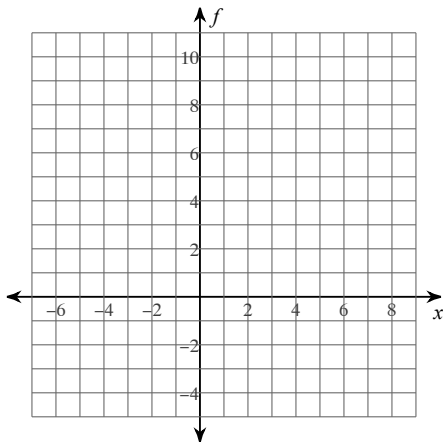6) $f(x) = \begin{cases} 1, & x < -1 \\ x^2 - 2x + 1, & x \ge -1 \end{cases}$

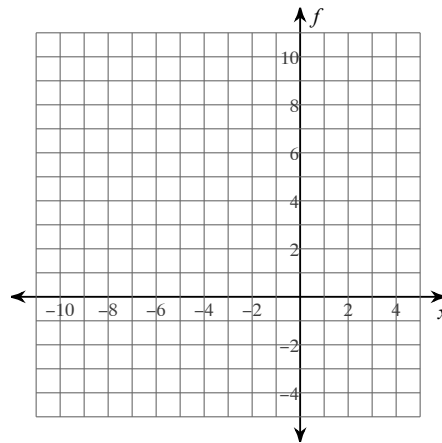7) $f(x) = \begin{cases} -2, & x \le -2 \\ -x - 5, & x > -2 \end{cases}$

8) $f(x) = \begin{cases} -2x + 7, & x < 1 \\ -x + 5, & x \ge 1 \end{cases}$

9) $f(x) = \begin{cases} -x + 3, & x < 1 \\ -2x + 6, & x \ge 1 \end{cases}$

10) $f(x) = \begin{cases} x^2 + 2x + 2, & x < -3 \\ 2, & x \ge -3 \end{cases}$

Answers to Graphing Piecewise Functions Practice (ID: 1)

1) $(-\infty, -2], (-2, \infty)$ 2) $(-\infty, 0], (0, \infty)$ 3) $(-\infty, 1], (1, \infty)$ 4) $(-\infty, 0), [0, \infty)$
5) $(-\infty, -3], (-3, \infty)$ 6) $(-\infty, -1), [-1, \infty)$ 7) $(-\infty, -2], (-2, \infty)$ 8) $(-\infty, 1), [1, \infty)$
9) $(-\infty, 1), [1, \infty)$ 10) $(-\infty, -3), [-3, \infty)$