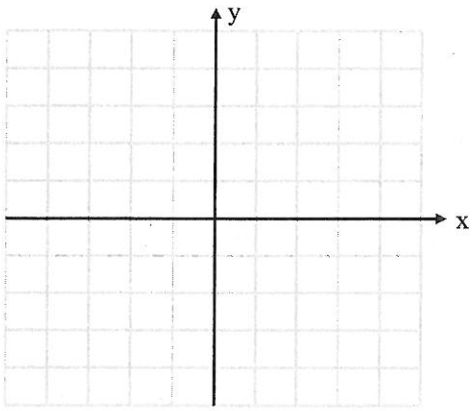
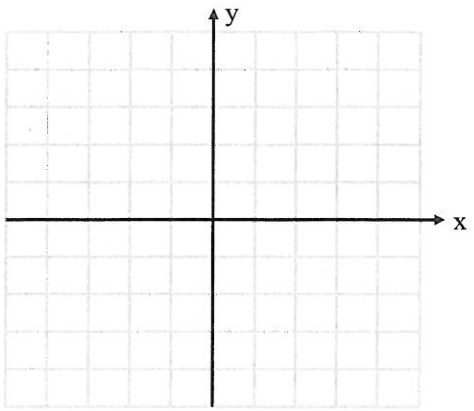
AFM Graphing Piece-wise Functions Name _____

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



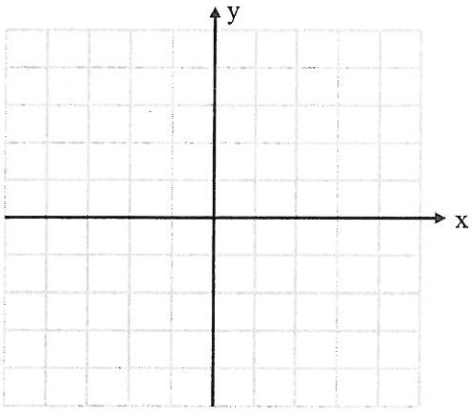
Domain:
Range:
Increasing:
Decreasing:

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



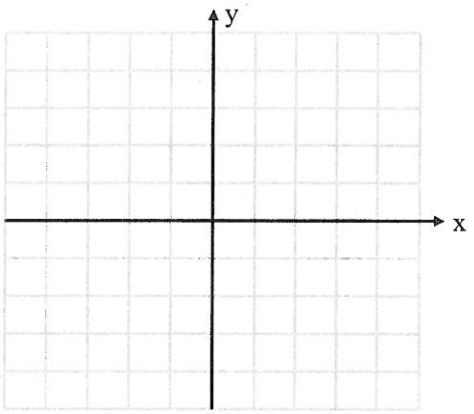
Domain:
Range:
Increasing:
Decreasing:

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



Domain:
Range:
Increasing:
Decreasing:

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

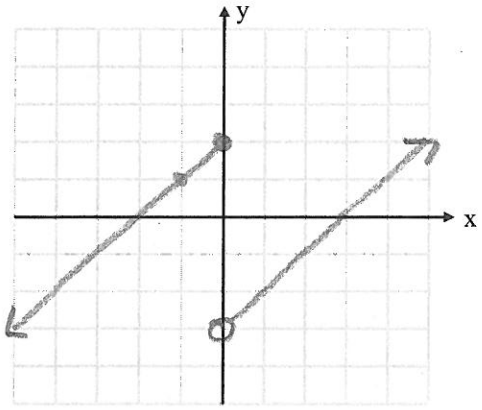


Domain:
Range:
Increasing:
Decreasing:

AFM Graphing Piece-wise Functions

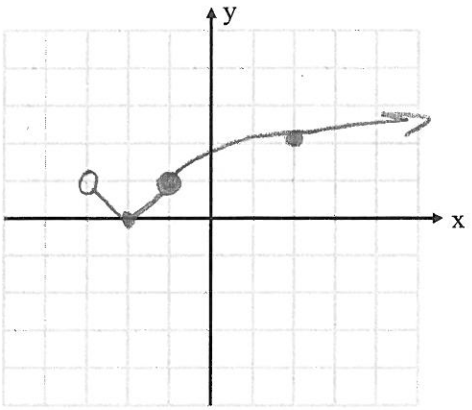
Name Key

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



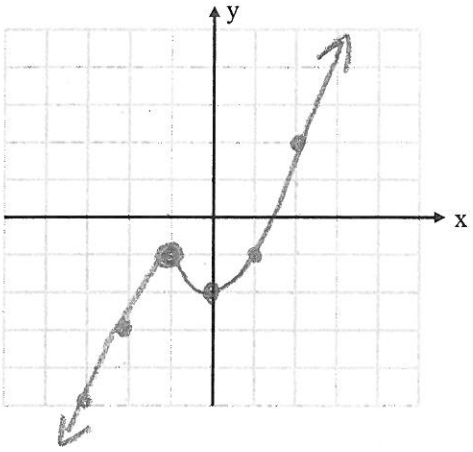
Domain: $(-\infty, \infty)$
Range: $(-\infty, \infty)$
Increasing: $(-\infty, \infty)$
Decreasing: never

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



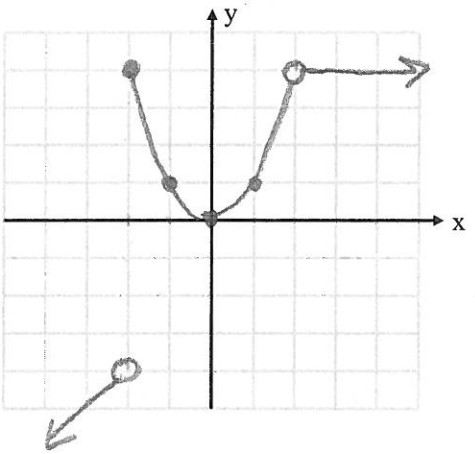
Domain: $(-3, \infty)$
Range: $[0, \infty)$
Increasing: $(-2, \infty)$
Decreasing: $(-3, -2)$

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



Domain: $(-\infty, \infty)$
Range: $(-\infty, \infty)$
Increasing: $(-\infty, -1) \cup (0, \infty)$
Decreasing: $(-1, 0)$

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



Domain: $(-\infty, 2) \cup (2, \infty)$
Range: $(-\infty, -4) \cup [0, 4]$
Increasing: $(-\infty, -2) \cup (0, 2)$
Decreasing: $(-2, 0)$