NAME:

Key

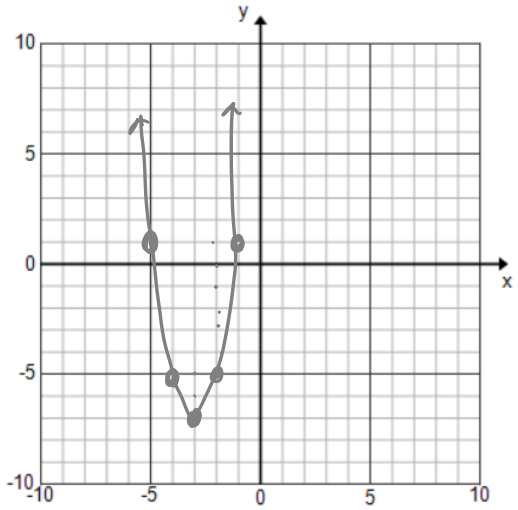
UNIT 8 DAY 8 – HOMEWORK
COMPLETING THE SQUARE

$y = 2(x + 3)^2 - 7$ 1, 3, 5

Vertex: (-3, -7) Pattern: 2, 6, 10

Domain: $(-\infty,$) Range: $[-7, \infty)$

As $x \to -\infty$, y ∞ As $x \to \infty$, y ∞

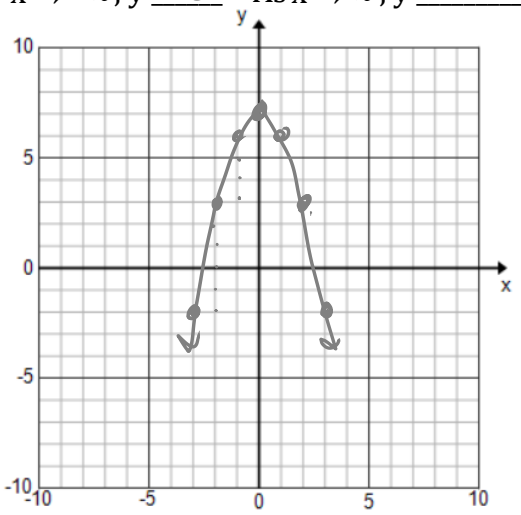


$y = -(x)^2 + 7$

Vertex: (0, 7) Pattern: -1, -3, -5

Domain: $(-\infty, \infty)$ Range: $(-\infty, 7]$

As $x \to -\infty$, y $-\infty$ As $x \to \infty$, y $-\infty$

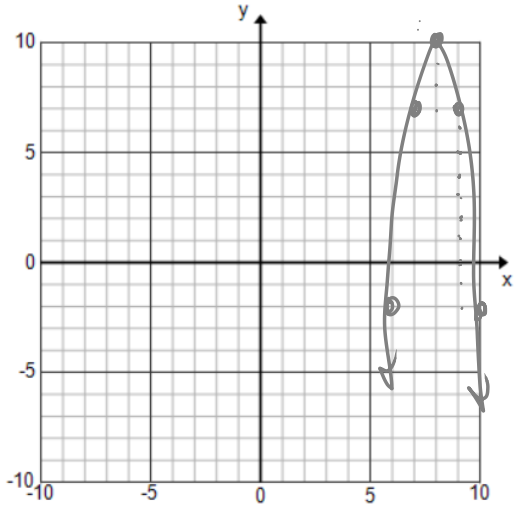


$y = -3(x - 8)^2 + 10$ 1, 3, 5

Vertex: (8, 10) Pattern: -3, -9, -15

Domain: $(-\infty, \infty)$ Range: $[10, -\infty)$

As $x \to -\infty$, y $-\infty$ As $x \to \infty$, y $-\infty$



$y = 0.5(x - 4)^2 + 6$

Vertex: (4, 6) Pattern: 0.5, 1.5, 2.5

Domain: $(-\infty, \infty)$ Range: $[6, \infty)$

As $x \to -\infty$, y ∞ As $x \to \infty$, y ∞