

LT 3.3 Skills Practice

Graphing Quadratic Functions using a Table

Determine whether each function has a maximum or a minimum, and find that value.

1. $f(x) = 2x^2 - 11$

$a = 2, b = 0, c = -11$

1) a is positive so HAPPY face
Minimum

2) $x = -\frac{b}{2a} = -\frac{0}{2(2)} = 0$

$f(0) = 2(0)^2 - 11 = -11$

Vertex at $(0, -11)$

ANSWER: Min at $y = -11$

2. $f(x) = x^2 - 10x + 5$

$a = 1, b = -10, c = 5$

Min at $y = -20$

3. $f(x) = -2x^2 + 8x + 7$

Max at $y = 15$

4. $f(x) = -2x^2 + 4x - 3$

Max at $y = -1$

5. $f(x) = 3x^2 + 12x + 3$

Min at $y = -9$

6. $f(x) = 2x^2 + 4x + 1$

Min at $y = -1$