

NO CALCULATOR

24

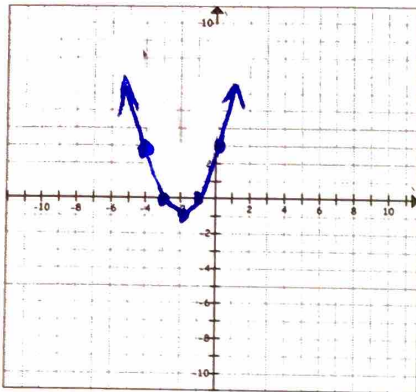
TARGET 2: GRAPHING QUADRATIC FUNCTIONS

1-3: Graph each function using 5 clear points. Then state the vertex, axis of symmetry, y-intercept, domain and range in interval notation, and finally, circle the descriptive word(s).

11:06 -14
8 min

2(-1)(-5)

1. $y = x^2 + 4x + 3$ (@2)



$-\frac{4}{2} = -2$ $y = 4 - 8 + 3 = -1$

Vertex: (-2, -1) (@1)

Axis of symm: x = -2 (@1)

y-intercept: (0, 3) (@1)

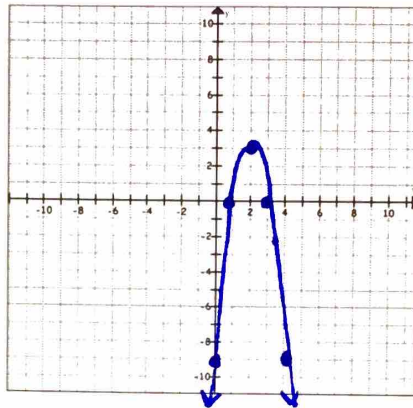
Domain: $(-\infty, \infty)$ (@1)

Range: [3, ∞) (@1)

Circle any that apply: (@1)

Stretch Compression Reflection
Maximum Minimum

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



Vertex: (2, 3) (@1)

Axis of symm: x = 2 (@1)

y-intercept: (0, -9) (@1)

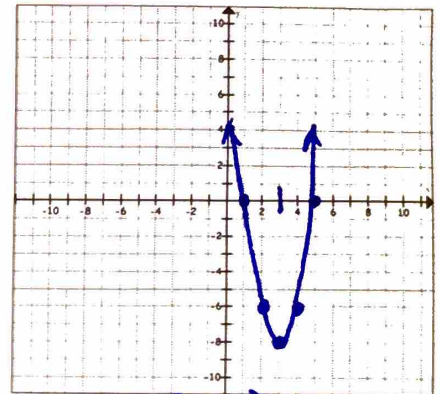
Domain: $(-\infty, \infty)$ (@1)

Range: $(-\infty, 3]$ (@1)

Circle any that apply: (@1)

Stretch Compression Reflection
Maximum Minimum

3. $y = 2(x - 1)(x - 5)$ (@2)



$y = 2(2x - 2)$

Vertex: (3, -8) (@1)

Axis of symm: x = 3 (@1)

y-intercept: (0, 10) (@1)

Domain: $(-\infty, \infty)$ (@1)

Range: [-8, ∞) (@1)

Circle any that apply: (@1)

Stretch Compression Reflection
Maximum Minimum

12

TARGET 4: SOLVING QUADRATIC EQUATIONS BY FACTORING

4-6: Solve each quadratic equation by factoring.

@3 points each

4. $5x^2 - 15x = 0$

$5x(x - 3) = 0$
 $5x = 0$ $x - 3 = 0$
 $x = 0$ $x = 3$

5. $x^2 + 5x - 6 = 0$

$(x + 6)(x - 1) = 0$
 $x + 6 = 0$, $x - 1 = 0$
 $x = \{-6, 1\}$

6. $x^2 = 100$

$x^2 - 100 = 0$
 $(x + 10)(x - 10) = 0$
 $x = \{-10, 10\}$

7. $3x^2 - 14x - 5 = 0$

$3x^2 - 14x - 5 = 0$
 $(3x + 1)(x - 5) = 0$
 $x = \{-\frac{1}{3}, 5\}$

11:11