

Algebra II Practice Quiz 5.2**Short Answer**

1. (5 points) Identify the axis of symmetry for the graph of $f(x) = -x^2 + 4x + 5$.

2. (5 points) Consider the function $f(x) = -4x^2 - 8x + 10$. Determine whether the graph opens up or down. Find the axis of symmetry, the vertex and the y-intercept. Graph the function.

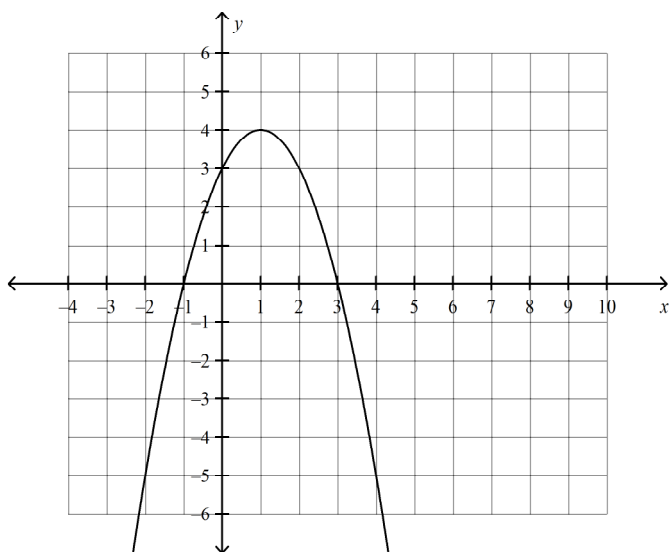
3. (5 points) Find the minimum or maximum value of $f(x) = -x^2 + 6x - 6$. Then state the domain and range of the function.

4. (5 points) The distance d in meters traveled by a skateboard on a ramp is related to the time traveled t in seconds. This is modeled by the function: $d(t) = 4.9t^2 - 2.3t + 5$. What is the maximum distance the skateboard can travel, and at what time would it achieve this distance? Round your answers to the nearest hundredth.

Name: _____

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5. (5 points) Which quadratic function does the graph represent?



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Answer Section

SHORT ANSWER

1. ANS:

$$x = 2$$

PTS: 5

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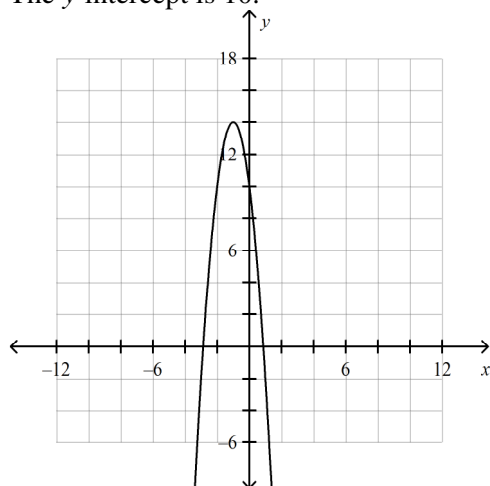
2. ANS:

The parabola opens downward.

The axis of symmetry is the line $x = -1$.

The vertex is the point $(-1, 14)$.

The y-intercept is 10.



PTS: 5

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3. ANS:

The maximum value is 3. D: {all real numbers}; R: $\{y \mid y \leq 3\}$

PTS: 5

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4. ANS:

4.73 meters at 0.23 seconds

PTS: 5

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5. ANS:

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

PTS: 5