ONTARIO PRINCIPLES OF MATHEMATICS, GRADE 10, ACADEMIC (MPM2D) · UNIT A · 10 QUESTIONS

Quadratic Relations — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **The smaller solution of the equation $x^2 + 3x = 0$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **A parabola has vertex (3, 11) and equation $y = 2(x - 3)^2 + 11$. Its y-intercept is**

ANSWER _____

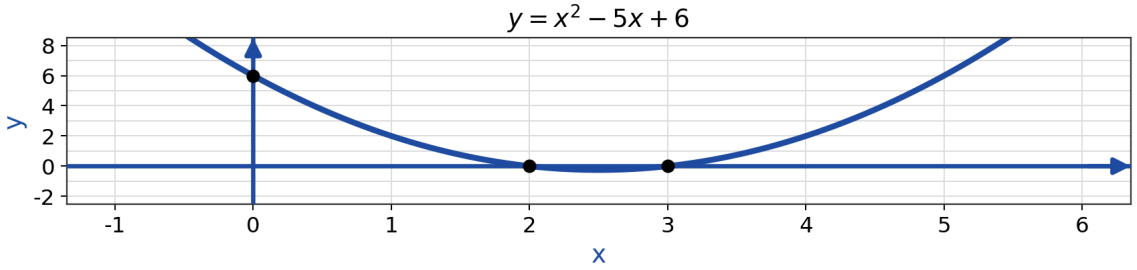
Understand It with Pulse | Flag a mistake

3 **A parabola has vertex (-2, 5) and equation $y = -(x + 2)^2 + 5$. Its y-intercept is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **The graph shows a parabola. The x-intercepts of the graph are**



- **A** x = 2, x = 3
- **B** x = -2, x = 3
- **C** x = 2, x = -3
- **D** x = -2, x = -3

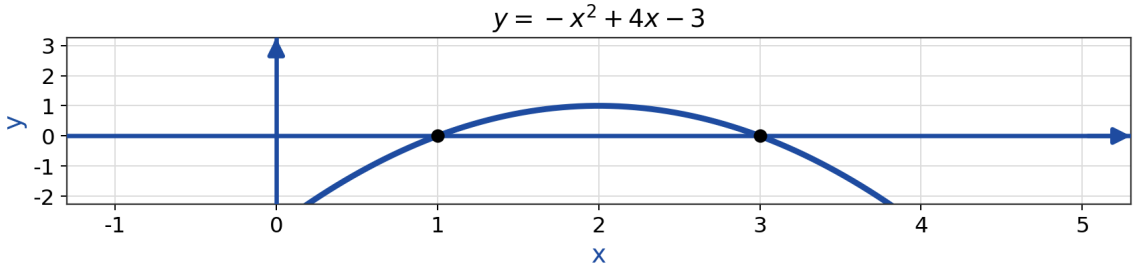
Understand It with Pulse | Flag a mistake

5 **Using the quadratic formula, the larger solution of $x^2 + 5x + 6 = 0$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **The graph shows a parabola. The maximum value of the relation is**



ANSWER

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7 **Compared with the graph of y = x², the graph of y = 2x² is**

A narrower

B wider

C the same width

D reflected only

Understand It with Pulse | Flag a mistake

8 **Compared with the graph of $y = x^2$, the graph of $y = 0.5x^2$ is**

- A narrower
- B wider
- C the same width
- D reflected only

Understand It with Pulse | Flag a mistake

9 **For any quadratic relation, the second differences of y-values for equally spaced x-values are**

- A zero
- B increasing
- C constant
- D decreasing

Understand It with Pulse | Flag a mistake

10 **The range of the relation $y = x^2 + 4$ is**

- **A** $y \geq 0$
- **B** $y \leq 4$
- **C** all real numbers
- **D** $y \geq 4$

Understand It with Pulse **Flag a mistake**

ANSWER KEY

1. -3
2. 29
3. 1
4. A
5. -2
6. 1
7. A
8. B
9. C
10. D

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