ALBERTA MATH 20-1 · UNIT 3 · 10 QUESTIONS

Quadratics — Practice Test

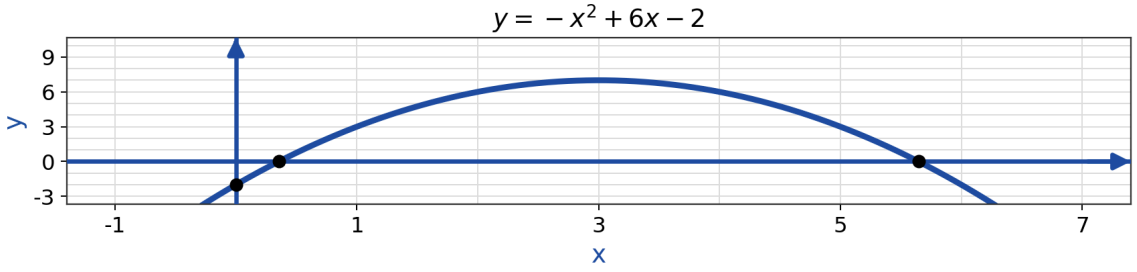
This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **The discriminant of the equation $5x^2 + 3x - 2 = 0$ is**

- A -31
- B 49
- C 31
- D -49

Understand It with Pulse | Flag a mistake

2 **The graph shown is a parabola. The y -coordinate of its vertex is**



ANSWER _____

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3 **Two numbers have a sum of 20. The maximum possible product of the two numbers is**

- A 96
- B 200
- C 50
- D 100

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4 **A parabola has vertex (1, -4) and passes through the point (3, 4). Its equation, in standard form, is**

- A $y = 2x^2 - 4x + 2$
- B $y = x^2 - 2x - 3$
- C $y = 2x^2 - 4x - 2$
- D $y = 2x^2 + 4x - 2$

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5 **The smaller root of the equation $2x^2 + 5x - 3 = 0$ is**

ANSWER _____

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6 **Expressed in vertex form, $y = -x^2 - 4x + 1$ is**

A $y = -(x - 2)^2 + 5$

B $y = -(x + 2)^2 + 5$

C $y = (x + 2)^2 + 5$

D $y = -(x + 2)^2 - 3$

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7 The length of a rectangle is 3 cm more than its width, and its area is 40 cm². The width of the rectangle, in cm, is

- A 4
- B 8
- C 5
- D 10

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8 The sum of the squares of two consecutive positive integers is 85. The larger of the two integers is

- A 7
- B 6
- C 8
- D 9

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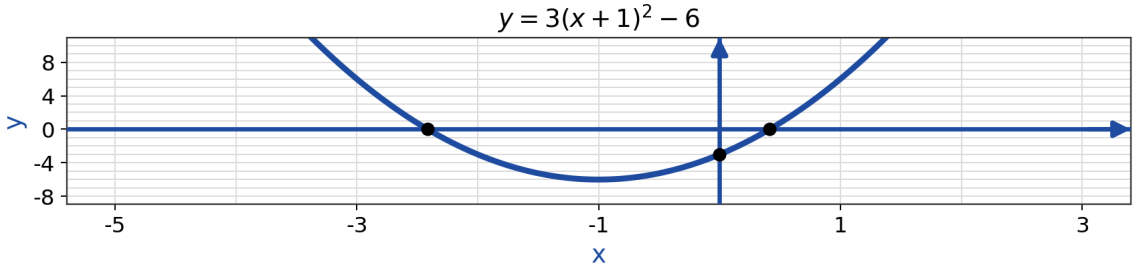
9 **The graph shown is a parabola. Its range is**



A y ≤ -6

B y ≥ -6

C y ≥ 6

D All real numbers

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10 **The roots of the equation $x^2 - 5x + 4 = 0$ are r and s. The value of $r^2 + s^2$ is**

ANSWER _____

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ANSWER KEY

1. B
2. 7
3. D
4. C
5. -3
6. B
7. C
8. A
9. B
10. 17

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