SOUTH DAKOTA ALGEBRA 2 · UNIT 2 · 10 QUESTIONS

Polynomials and Rational Functions — 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 **In simplest form, $x^2 - 25/x + 5$, for $x \neq -5$, is**

- **A** x - 5
- **B** x + 25
- **C** x - 25
- **D** x + 5

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2 For $(x + 3)^3(x - 1)$, the multiplicity of the zero -3 is

- A 3
- B 4
- C 1
- D 2

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3 As $x \to -\infty$, the value of $2x^3 + x$ approaches

- A 2
- B positive infinity
- C negative infinity
- D 0

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4 **The graph of $y = x^2 - 9/x + 3$ has a hole at**

- **A** $x = 3$
- **B** $x = -3$
- **C** $x = 9$
- **D** $y = -3$

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5 **The quotient of $(x^2 - 5x + 6) \div (x - 2)$ is**

- **A** $x + 3$
- **B** $x - 3$
- **C** $x + 2$
- **D** $x - 2$

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6 **The zeros of $x^2 + 9$ are**

- A 9, -9
- B none
- C 3, -3
- D 3i, -3i

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7 **The sum $2/x + 3/x$ is**

- A $\underline{1}$
- B $\underline{5}$
- C $\underline{6}$
- D $\underline{5}$

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8 The solution of $\frac{4}{x} = 2$ is

- **A** x = 8
- **B** x = 4
- **C** x = 2
- **D** x = 1

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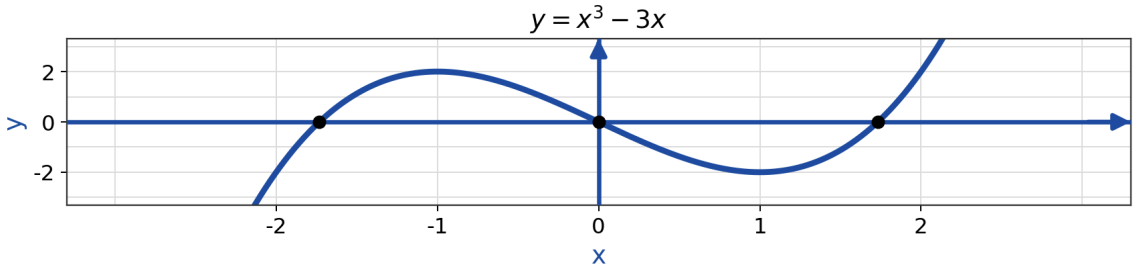
9 The graph below shows $y = x^3 - 3x$. The sum of its zeros is



ANSWER

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10 **The product of the zeros of $x^2 - 4x + 3$ is**

A -4

B 3

C -3

D 4

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ANSWER KEY

1. A
2. A
3. C
4. B
5. B
6. D
7. B
8. C
9. 0
10. B

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