ARIZONA ALGEBRA II · 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 **Let $P(x) = x^3 + x^2 - 4$. The value of $P(-2)$ is**

- A 8
- B -4
- C 0
- D -8

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2 The quotient $\frac{x^2 - 9}{x - 3}$ is

- **A** x + 9
- **B** x - 9
- **C** x + 3
- **D** x - 3

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3 The vertical asymptote of $y = \frac{1}{x - 7}$ is

- **A** x = 1
- **B** x = -1
- **C** x = 7
- **D** x = -7

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4 The horizontal asymptote of $y = \frac{2x^2 + 1}{x^2 - 3}$ is

- **A** $y = -3$
- **B** $y = 1$
- **C** $y = 0$
- **D** $y = 2$

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5 In simplest form, $\frac{x^2 - 16}{x + 4}$ is

- **A** 16
- **B** $x^2 - 4$
- **C** $x - 4$
- **D** $x + 4$

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6 **The discriminant of $x^2 - 4x + 5$ is -4. The equation has**

- A no roots
- B one repeated real root
- C no real roots
- D two distinct real roots

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7 **The difference $(5 - 3i) - (2 + i)$ is**

- A $3 - 4i$
- B $3 - 2i$
- C $7 - 4i$
- D $3 + 4i$

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8 **The value of i^2 is**

A i

B 1

C -1

D -i

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9 **The sum of the zeros of $x^2 + 9x + 18$ is**

A 18

B -18

C -9

D 9

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10 **Let $Q(x) = x^2 - 5x + 6$. The value of $Q(4)$ is**

ANSWER

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ANSWER KEY

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

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