ALBERTA MATH 20-1 · UNIT 4 · 10 QUESTIONS

Radicals — 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 product $(3\sqrt{2})(2\sqrt{5})$, in simplest form, is

- A $6\sqrt{10}$
- B $5\sqrt{10}$
- C $12\sqrt{5}$
- D $6\sqrt{7}$

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2 The expanded form of $(\sqrt{3} + 4)(\sqrt{3} - 1)$ is

- A $7 + 3\sqrt{3}$
- B $-1 - 3\sqrt{3}$
- C $3 - \sqrt{3}$
- D $-1 + 3\sqrt{3}$

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3 When $\frac{9}{\sqrt{6}}$ is rationalized and simplified, the result is

A $\frac{9\sqrt{6}}{2}$

B $\frac{3\sqrt{3}}{2}$

C $\frac{3\sqrt{6}}{2}$

D $\frac{\sqrt{6}}{2}$

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4 When $\sqrt[3]{81}$ is written in simplest form as $a\sqrt[3]{b}$, where a and b are integers, the value of a + b is

ANSWER _____

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5 The simplified value of $\frac{\sqrt{48}}{\sqrt{3}}$ is

- **A** $4\sqrt{3}$
- **B** 16
- **C** $2\sqrt{3}$
- **D** 4

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6 When the denominator of $\frac{5}{2+\sqrt{3}}$ is rationalized, the result is

- **A** $10 + 5\sqrt{3}$
- **B** $10 - 5\sqrt{3}$
- **C** $5\sqrt{3} - 10$
- **D** $\frac{5(2-\sqrt{3})}{7}$

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7 The equation $\sqrt{3x - 5} = x - 3$ has one extraneous root. The value of the extraneous root is

ANSWER _____

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8 For $x \geq 0$, the simplified form of $\sqrt{18x} \cdot \sqrt{2x^3}$ is

A $6x^2$

B $36x^4$

C $6x^4$

D $18x^2$

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9 **Of the following values, the smallest is**

- **A** $3\sqrt{3}$
- **B** $\sqrt{23}$
- **C** $2\sqrt{6}$
- **D** $4\sqrt{2}$

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10 **The equation $\sqrt{2x + 7} = x + 2$ has one extraneous root. The value of the valid solution is**

ANSWER _____

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ANSWER KEY

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

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