

Brett Robbins Academic Consulting

Mathematics 20-1 Practice Test

Unit 4: Radicals

10 Questions

Original practice questions written to the Alberta curriculum, in the style of past diploma examinations. Work through each question, then check your answers with the key at the end.

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, contact Brett for clarification.

Question 1

The simplified form of $\sqrt{72}$ is

- A) $6\sqrt{2}$ B) $3\sqrt{6}$
C) $12\sqrt{2}$ D) $\sqrt{70}$

Question 2

Written as an entire radical, $4\sqrt{3}$ is equal to

- A) $\sqrt{12}$
B) $\sqrt{48}$
C) $\sqrt{36}$
D) $\sqrt{144}$

Question 3

The simplified form of $\sqrt{12} + \sqrt{27}$ is

- A) $\sqrt{39}$ B) $5\sqrt{6}$
C) $5\sqrt{3}$ D) $6\sqrt{3}$

Question 4

For the expression $\sqrt{2x-6}$ to represent a real number, the restriction on x is

- A) $x \geq 0$
B) $x \leq 3$
C) $x > 3$
D) $x \geq 3$

Question 5

When $\sqrt{200}$ is written in simplest form as $a\sqrt{b}$, where a and b are integers, the value of $a + b$ is

Question 6

The simplified form of $\sqrt{10} \cdot \sqrt{15}$ is

A) $5\sqrt{6}$

B) $6\sqrt{5}$

C) $5\sqrt{30}$

D) 15

Question 7

The expression $3\sqrt{20} - 2\sqrt{45} + \sqrt{5}$ simplifies to

A) $7\sqrt{5}$

B) $\sqrt{5}$

C) 0

D) $5\sqrt{5}$

Question 8

When $\frac{7}{\sqrt{5}}$ is rationalized, the result is

A) $7\sqrt{5}$

B) $\frac{\sqrt{35}}{5}$

C) $\frac{7\sqrt{5}}{5}$

D) $\frac{7}{5}$

Question 9

The simplified form of $\sqrt[3]{54}$ is

A) $2\sqrt[3]{3}$

B) $3\sqrt[3]{6}$

C) $9\sqrt[3]{2}$

D) $3\sqrt[3]{2}$

Question 10

The value of x that satisfies $\sqrt{x+7} = 5$ is

Answer Key

- | | | |
|------|-------|--------|
| 1. A | 5. 12 | 9. D |
| 2. B | 6. A | 10. 18 |
| 3. C | 7. B | |
| 4. D | 8. C | |

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