

Brett Robbins Academic Consulting

Mathematics 10C Practice Test

Unit 2: Roots and Powers

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

When written as a single power, $3^2 \cdot 3^5$ is equal to

- | | |
|-------------|----------|
| A) 3^{10} | B) 3^7 |
| C) 9^7 | D) 3^3 |

Question 2

The value of $(-2)^4$ is

- | | |
|-------|--------|
| A) 16 | B) -16 |
| C) 8 | D) -8 |

Question 3

When written as a single power, $\frac{7^9}{7^4}$ is equal to

- | | |
|-------------|----------|
| A) 7^{13} | B) 7^4 |
| C) 7^{36} | D) 7^5 |

Question 4

The value of 12^0 is

- | | |
|------|--------|
| A) 0 | B) 12 |
| C) 1 | D) 120 |

Question 5

When written as a mixed radical in simplest form, $\sqrt{50}$ is equal to

- | | |
|-----------------|-----------------|
| A) $5\sqrt{2}$ | B) $2\sqrt{5}$ |
| C) $25\sqrt{2}$ | D) $5\sqrt{10}$ |

Question 6

The value of 5^{-2} is

A) -25

B) -10

C) 25

D) $\frac{1}{25}$

Question 7

The value of $16^{3/4}$ is

A) 12

B) 8

C) 64

D) 4

Question 8

When simplified, $(3x^2)^3$ is equal to

A) $9x^6$

B) $27x^5$

C) $27x^6$

D) $3x^6$

Question 9

If $2^x = 128$, then the value of x is ____.

Question 10

When written in radical form, $x^{5/3}$ is equal to

A) $\sqrt[3]{x^5}$

B) $\sqrt[5]{x^3}$

C) $\sqrt{x^3}$

D) $(\sqrt[3]{x^5})^2$

Answer Key

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

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