

Brett Robbins Academic Consulting

Mathematics 20-1 Practice Test

Unit 5: Rational Expressions

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 non-permissible values of $\frac{2x+1}{x^2-7x+12}$ are

A) $x \neq -3, x \neq -4$

B) $x \neq 3, x \neq 4$

C) $x \neq 3, x \neq -4$

D) $x \neq -3, x \neq 4$

Question 2

When simplified, $\frac{x^2-4}{x^2+5x+6}$ is equivalent to

A) $\frac{x-2}{x+3}$

B) $\frac{x+2}{x+3}$

C) $\frac{x-2}{x-3}$

D) $\frac{x-2}{x+2}$

Question 3

When simplified, $\frac{4x-8}{x^2-4}$ is equivalent to

A) $\frac{2}{x+2}$

B) $\frac{4}{x-2}$

C) $\frac{4}{x+2}$

D) $\frac{x-2}{x+2}$

Question 4

The sum of the non-permissible values of $\frac{x+3}{x^2-2x-8}$ is _____

Question 5

When simplified, $\frac{3x}{x-1} \cdot \frac{x^2-1}{6x^2}$ is equivalent to

A) $\frac{1}{2x}$

B) $\frac{x-1}{2x}$

C) $\frac{x+1}{6x}$

D) $\frac{x+1}{2x}$

Question 6

When simplified, $\frac{x^2-9}{x} \div \frac{x+3}{x^2}$ is equivalent to

A) $x^2 + 3x$

B) $x^2 - 3x$

C) $x - 3$

D) $3x - x^2$

Question 7

When simplified, $\frac{x^2-3x}{x^2-9}$ is equivalent to

A) $\frac{x}{x+3}$

B) $\frac{x-3}{x+3}$

C) $\frac{x}{x-3}$

D) $\frac{x^2-3x}{x+3}$

Question 8

When $\frac{x^2-25}{x^2+2x-15}$ is simplified and then evaluated at $x=2$,
the value is ____

Question 9

When simplified, $\frac{2}{x} + \frac{3}{x+1}$ is equivalent to

A) $\frac{5}{x(x+1)}$

B) $\frac{5x+2}{2x+1}$

C) $\frac{5x+2}{x(x+1)}$

D) $\frac{2x+5}{x(x+1)}$

Question 10

When simplified, $\frac{4}{x-2} - \frac{1}{x}$ is equivalent to

A) $\frac{3x-2}{x(x-2)}$

B) $\frac{3}{x-2}$

C) $\frac{5x+2}{x(x-2)}$

D) $\frac{3x+2}{x(x-2)}$

Answer Key

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

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