

Brett Robbins Academic Consulting

Mathematics 20-1 Practice Test

Unit 6: Absolute Value and Reciprocal Functions

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 value of $|-7| + |3 - 8|$ is

- A) 2
B) -2
C) -12
D) 12

Question 2

The solutions to the equation $|x - 4| = 9$ are

- A) $x = -5$ and $x = 13$
B) $x = 5$ and $x = 13$
C) $x = -13$ and $x = 5$
D) $x = 13$ only

Question 3

The vertex of the graph of $y = |x - 3| + 2$ is

- A) $(-3, 2)$
B) $(3, 2)$
C) $(3, -2)$
D) $(-3, -2)$

Question 4

The non-permissible value of x for the function $y = \frac{1}{x+5}$ is

- A) $x = 5$
B) $x = 0$
C) $x = -5$
D) $x = 1$

Question 5

The sum of the solutions to the equation $|2x + 1| = 7$ is _____.

Question 6

The solutions to the equation $3|x + 2| - 5 = 13$ are

- A) $x = 4$ only
B) $x = -4$ and $x = 8$
C) $x = -8$ only
D) $x = -8$ and $x = 4$

Question 7

The range of the function $y = -2|x - 1| + 5$ is

- A) $y \leq 5$
B) $y \geq 5$
C) $y \leq 1$
D) $y \geq 1$

Question 8

For $f(x) = x - 2$, the invariant points of the graph of $y = \frac{1}{f(x)}$ occur when

- A) $x = 1$ and $x = 3$
B) $x = 2$ only
C) $x = -1$ and $x = -3$
D) $x = 0$ and $x = 2$

Question 9

The product of the x -intercepts of the graph of $y = |x + 2| - 6$ is _____.

Question 10

The y -intercept of the graph of $y = |x - 5| - 3$ is

- A) 2
B) -3
C) -8
D) 5

Answer Key

- | | | |
|------|-------|--------|
| 1. D | 5. -1 | 9. -32 |
| 2. A | 6. D | 10. A |
| 3. B | 7. A | |
| 4. C | 8. A | |

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