

**Brett Robbins Academic Consulting**

# **Mathematics 20-1 Practice Test**

## **Unit 7: Systems of Equations and Inequalities**

5 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 number of points of intersection of the graphs of  $y = x + 1$  and  $y = x^2 - 3$  is

- A) 0
- B) 1
- C) 2
- D) 3

Question 2

The solution to the system  $y = x + 2$  and  $y = x^2 - 4x + 2$  is

- A) (0, 2) only
- B) (0, 2) and (5, 7)
- C) (2, 0) and (7, 5)
- D) there is no solution

Question 3

The line  $y = 2x + 1$  is tangent to the parabola  $y = x^2 - 2x + 5$ ,  
so the system has exactly one solution. The  $y$ -coordinate of the point of tangency is

Question 4

A point that belongs to the solution region of the system  $y > x - 1$  and  $y \leq 2x + 3$  is

- A) (0, 0)
- B) (-2, -4)
- C) (2, 8)
- D) (5, 3)

Question 5

The number of real solutions to the system  $y = x^2 + 3$  and  $y = 2x + 1$  is

A) 2

B) 1

C) 3

D) 0

# Answer Key

- |      |      |      |
|------|------|------|
| 1. C | 3. 5 | 5. D |
| 2. B | 4. A |      |

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