ALBERTA MATH 20-1 · UNIT 7 · 5 QUESTIONS

Systems of Equations and Inequalities — Practice Test

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1 **An aerial view of a four-way road intersection with crosswalks and cars. The number of points of intersection of the graphs of $y = x - 1$ and $y = x^2 + 1$ is**



A 2

B 0

C 1

D 3

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2 **The graphs shown are a line and a parabola. The solution to the system they form is**

- **A** (0, 3) only
- **B** (0, 3) and (4, 11)
- **C** (4, 3) and (0, 11)
- **D** there is no solution

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3 **The line $y = 2x - 3$ is tangent to the parabola $y = x^2 - 6x + 13$, so the system has exactly one solution. The x-coordinate of the point of tangency is**

ANSWER _____

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4 **A point that belongs to the solution region of the system $y < x + 2$ and $y \geq -x + 1$ is**

A (0, 0)

B (-1, 0)

C (2, 3)

D (3, 6)

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

A 0

B 2

C 1

D 3

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ANSWER KEY

1. B
2. B
3. 4
4. C
5. C

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