ALBERTA MATH 30-2 · UNIT 5 · 5 QUESTIONS

Polynomial Functions — Practice Test

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1 **The y-intercept of the graph of $g(x) = -2x^3 + x^2 + 5x - 9$ is**

- A 9
- B 5
- C -9
- D -2

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2 **The end behaviour of the graph of $f(x) = 2x^2 - 3x + 1$ is best described by**

- A As $x \to -\infty$, $y \to \infty$ and as $x \to \infty$, $y \to \infty$
- B As $x \to -\infty$, $y \to -\infty$ and as $x \to \infty$, $y \to -\infty$
- C As $x \to -\infty$, $y \to \infty$ and as $x \to \infty$, $y \to -\infty$
- D As $x \to -\infty$, $y \to -\infty$ and as $x \to \infty$, $y \to \infty$

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3 **The graph below shows a quadratic function. The number of x-intercepts of the graph is**

A 0

B 2

C 1

D 4

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4 **If f(x) = x² - 4x + 1, then the value of f(3) is Record your answer as an integer.**

ANSWER _____

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5 **An open box is made from a square sheet of plastic with side length 15 cm by cutting squares of side length x cm from each corner and folding up the sides. An expression for the volume of the box, V(x), in cm^3, is**

- **A** $V(x) = (15 - 2x)^2$
- **B** $V(x) = x(15 - x)^2$
- **C** $V(x) = x(15 - 2x)(15 + 2x)$
- **D** $V(x) = x(15 - 2x)^2$

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ANSWER KEY

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

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