ALBERTA MATH 30-2 · UNIT 5 · 10 QUESTIONS

Polynomial Functions — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **The graph below shows a quadratic function. The maximum value of the function is**

- **A** 3
- **B** 4
- **C** 9
- **D** -5

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2 **A set of data is plotted, and the points rise and then fall, changing direction once. The lowest degree of a polynomial function that models the data well is**

- **A** 2
- **B** 3
- **C** 1
- **D** 4

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3 **The graph below shows a quadratic function. An equation of the function is**

- **A** $y = -(x + 2)(x - 4)$
- **B** $y = (x - 2)(x + 4)$
- **C** $y = (x + 2)(x - 4)$
- **D** $y = 2(x + 2)(x - 4)$

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4 **The y-intercept of the graph of h(x) = (x - 3)(x + 1)(x + 5) is Record your answer as an integer.**

ANSWER _____

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5 **The volume of an open box is modelled by V(x) = x(18 - 2x)(12 - 2x), where x is the side length, in centimetres, of the squares cut from the corners. The values of x that make sense in this context are**

A $0 < x < 9$

B $x > 0$

C $0 < x < 12$

D $0 < x < 6$

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6 **The maximum number of x-intercepts that the graph of a cubic function can have is**

A 2

B 3

C 4

D 1

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7 **A box has a length of (x + 4) cm, a width of x cm, and a height of (x - 1) cm. When x = 5, the volume of the box, in cm³, is Record your answer as an integer.**

ANSWER _____

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8 **Which statement is true about the function $f(x) = x^3 - 8$?**

A Its x-intercept is 2.

B Its y-intercept is 8.

C It is a quadratic function.

D Its graph falls to the right.

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9 **The product of the zeros of the function $f(x) = (x + 4)(x - 2)(x - 6)$ is Record your answer as an integer.**

ANSWER _____

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10 **A cubic function is used to model data collected from 2010 to 2020. The model is used to estimate a value for 2015. This is an example of**

- **A** Extrapolation
- **B** End behaviour
- **C** Interpolation
- **D** A turning point

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ANSWER KEY

1.	B	**5.**	D	**9.**	-48
2.	A	**6.**	B	**10.**	C
3.	C	**7.**	180		
4.	-15	**8.**	A		

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