ALASKA ALGEBRA II · UNIT 1 · 10 QUESTIONS

Functions and Graphs — 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 Let f(x) = x + 5 for x < 0 and f(x) = 2x for x ≥ 0. The value of f(3) is

- A 8
- B 3
- C 11
- D 6

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2 The sum of the solutions of |x - 7| = 2 is

- A 9
- B 5
- C 14
- D 7

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3 **The average rate of change of $f(x) = 2x^2$ on the interval $1 \leq x \leq 4$ is**

- **A** 6
- **B** 10
- **C** 15
- **D** 30

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4 **Which statement about the relation {(1, 3), (2, 4), (3, 3)} is true?**

- **A** It is not a function because 3 appears twice as an output
- **B** It is a function because every input has exactly one output
- **C** It is not a function because it has three pairs
- **D** It is a function because every output is different

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5 The x-intercept of $y = 4x - 20$ is

- A 5
- B -5
- C 20
- D 4

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6 A linear function passes through (0, -2) and (3, 7). Its slope is

- A 2
- B -3
- C 3
- D $\frac{1}{3}$

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7 **The function $f(x) = x^3 + x$ is**

A even

B neither even nor odd

C odd

D both even and odd

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8 **The point (2, -6) lies on the graph of y = f(x). The corresponding point on the graph of the inverse, $y = f^{-1}(x)$, is**

A (2, 6)

B (-6, 2)

C (6, -2)

D (-2, 6)

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9 **Compared to the graph of y = f(x), the graph of y = -f(x) + 4 has been**

- **A** reflected in the y-axis and shifted up 4 units
- **B** reflected in the x-axis and shifted down 4 units
- **C** reflected in the x-axis and shifted up 4 units
- **D** shifted up 4 units only

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10 **If $f(x) = (x - 2)^2 + 1$, then f(5) is**

ANSWER _____

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ANSWER KEY

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

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