ALBERTA MATH 31 · UNIT 4 · 10 QUESTIONS

Integrals — 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 $\int e^{-x}\,dx$ is equal to

- **A** $e^{-x} + C$
- **B** $-xe^{-x} + C$
- **C** $\frac{e^{-x}}{x} + C$
- **D** $-e^{-x} + C$

Understand It with Pulse | Flag a mistake

2 The value of $\int_0^1 e^x\,dx$ is

- **A** $e - 1$
- **B** e
- **C** 1
- **D** $e + 1$

Understand It with Pulse | Flag a mistake

3 $\int \frac{4}{x^2} dx$ is equal to

- **A** $\frac{4}{x} + C$
- **B** $-\frac{2}{x^3} + C$
- **C** $-\frac{4}{x} + C$
- **D** $4\ln|x| + C$

Understand It with Pulse | Flag a mistake

4 The value of $\int_0^3 (x^2 + 1)\, dx$ is _____ Record your answer as an integer.

ANSWER _____

Understand It with Pulse | Flag a mistake

5 The value of $\int_{-2}^{2} x^2\,dx$ is

- **A** $\frac{8}{3}$
- **B** $\frac{16}{3}$
- **C** 0
- **D** 4

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6 For the function f whose graph is shown, the area of the region under the graph of f and above the x-axis, from x = 0 to x = 3, is

- **A** 7.5
- **B** 6
- **C** 9
- **D** 4.5

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7 The graph of the velocity of a particle is shown. The displacement of the particle during the first 6 seconds, in metres, is _____ Record your answer as an integer.

ANSWER _____

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8 The average value of f(x) = 2x on the interval [0, 4] is

A 4

B 8

C 2

D 16

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9 The value of $\int_0^4 \frac{1}{x+1} dx$, to the nearest hundredth, is _____ Record your answer to the nearest hundredth.

ANSWER _____

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10 $\int \sec x \tan x \, dx$ is equal to

A. $\tan x + C$

B. $\sec x + C$

C. $-\sec x + C$

D. $\sec^2 x + C$

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ANSWER KEY

1.	D	**5.**	B	**9.**	1.61
2.	A	**6.**	A	**10.**	B
3.	C	**7.**	6		
4.	12	**8.**	A		

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