PRINCE EDWARD ISLAND CALCULUS 12 · UNIT D · 25 QUESTIONS

Integrals and Their Applications — 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 indefinite integral $\int x^2\,dx$, evaluated as the coefficient form , has power 3 and coefficient as a decimal , rounded to four decimal places , given by the reciprocal of 3 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **The indefinite integral $\int x^3\,dx$, evaluated as the coefficient form , has power 4 and coefficient as a decimal , rounded to four decimal places , given by the reciprocal of 4 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **The indefinite integral $\int x^4\,dx$, evaluated as the coefficient form, has power 5 and coefficient as a decimal, given by the reciprocal of 5 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **The definite integral from 0 to 2 of x with respect to x is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **The definite integral from 0 to 4 of x with respect to x is**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **The definite integral from 0 to 3 of x with respect to x is**

ANSWER _____

Understand It with Pulse | Flag a mistake

7 **The definite integral from 0 to 2 of x^2 with respect to x is**

ANSWER _____

Understand It with Pulse | Flag a mistake

8 **The definite integral from 0 to 3 of x^2 with respect to x is**

ANSWER _____

Understand It with Pulse | Flag a mistake

9 **The definite integral from 0 to 2 of 3 with respect to x is**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **The definite integral from 1 to 3 of 2x with respect to x is**

ANSWER _____

Understand It with Pulse | Flag a mistake

11 **An antiderivative of a function is a function whose**

A derivative is the original function

B integral is zero

C derivative is zero

D value is zero

Understand It with Pulse | Flag a mistake

12 **The definite integral of a positive function over an interval gives**

A slope of the curve

B maximum value

C average value only

D area under the curve

Understand It with Pulse | Flag a mistake

13 **The fundamental theorem of calculus links**

A algebra and geometry

B trigonometry and logarithms

C differentiation and integration

D limits and continuity

Understand It with Pulse | Flag a mistake

14 **The constant of integration is added because**

A limits are infinite

B derivatives of constants are zero

C integrals are always positive

D areas are approximate

Understand It with Pulse | Flag a mistake

15 **Integration by substitution reverses the**

A chain rule

B product rule

C quotient rule

D power rule

Understand It with Pulse | Flag a mistake

16 **The area between two curves is found by integrating the**

A sum of the functions

B product of the functions

C quotient of the functions

D difference of the functions

Understand It with Pulse | Flag a mistake

17 **A Riemann sum approximates an integral using**

A circles

B tangents

C rectangles

D triangles

Understand It with Pulse | Flag a mistake

18 **The integral of sine x is**

A negative sine x + a constant

B negative cosine x + a constant

C cosine x + a constant

D sine x + a constant

Understand It with Pulse | Flag a mistake

19 **The definite integral from 0 to 4 of x^2 with respect to x as a decimal , rounded to four decimal places , is**

ANSWER

Understand It with Pulse | Flag a mistake

20 **The definite integral $\int_0^1 5x^4\,dx$ is**

ANSWER

Understand It with Pulse | Flag a mistake

21 **The definite integral from 2 to 4 of x with respect to x is**

ANSWER

Understand It with Pulse | Flag a mistake

22 **The area under y = 3 from x = 0 to x = 4 is**

ANSWER

Understand It with Pulse | Flag a mistake

23 **The definite integral from 0 to 3 of x^3 with respect to x as a decimal is**

ANSWER _____

Understand It with Pulse | Flag a mistake

24 **The indefinite integral of 2x evaluated at the power form gives coefficient $1x^2$, so the value at x = 3 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

25 **The definite integral from 0 to 2 of x^3 with respect to x is**

ANSWER _____

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. 0.3333
2. 0.25
3. 0.2
4. 2
5. 8
6. 4.5
7. 2.6667
8. 9
9. 6
10. 8
11. A
12. D
13. C
14. B
15. A
16. D
17. C
18. B
19. 21.3333
20. 1
21. 6
22. 12
23. 20.25
24. 9
25. 4

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