

1. $\int (2x + 3) \, dx =$

- a) $x^2 + 3x + C$
- b) $x^2 + x + C$
- c) $x^3 + 3x^2 + C$
- d) $2x^2 + 3x + C$

2. The integral of a constant c with respect to x is:

- a) $c \cdot x$
- b) $c + x$
- c) c/x
- d) x/c

3. $\int x^n \, dx =$ where $n \neq -1$

- a) $x^{n+1}/(n+1) + C$
- b) $n \cdot x^{n-1} + C$
- c) $\ln|x| + C$
- d) $x^n + C$

4. The integral of $1/x$ with respect to x is:

- a) $e^x + C$
- b) $x + C$
- c) $\ln|x| + C$
- d) $1/x + C$

5. $\int 4\sec^2 x \, dx =$

- a) $\tan x + C$
- b) $\tan^2 x + C$
- c) $4 \tan^2 x + C$
- d) $4 \tan x + C$

6. $\int \csc x (\csc x + \cot x) =$

- a) $\cot x + \csc x + C$
- b) $-\csc^3 x + C$
- c) $-(\cot x + \csc x) + C$
- d) $\cot^3 x + C$

7. $\int \sqrt{x} \, dx =$

- a) $\frac{3}{2}(\sqrt{x})^2 + C$
- b) $\frac{2}{3}(\sqrt{x})^3 + C$
- c) $(\sqrt{x})^3 + C$
- d) $\sqrt{x} + C$

8. The constant C in an indefinite integral represents:

- a) The slope
- b) The constant of integration
- c) The variable
- d) The function's maximum

9. $\int \sin x \, dx =$

- a) $-\cos x + C$
- b) $\cos x + C$
- c) $\tan x + C$
- d) $-\sin x + C$

10. $\int e^x \, dx =$

- a) $e^x + C$
- b) $\ln|x| + C$
- c) $x \cdot e^x + C$
- d) $e^{x+1} + C$