



Class 12 Mathematics | Applications Of Integrals

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

1. The area under $y=x$ from $x=0$ to $x=4$ is:

A. 12 B. 8 C. 4 D. 16

2. The area under $y=x^2$ on $[0,2]$ is:

A. $8/3$ B. 4 C. 8 D. $4/3$

3. The area between $y=x$ and $y=x^2$ on $[0,1]$ is:

A. $1/2$ B. $1/6$ C. $1/3$ D. 1

4. The area under $y=\sin x$ from 0 to π is:

A. 0 B. π C. 2 D. 1

5. The area between $y=4$ and $y=x^2$ is:

A. 8 B. $16/3$ C. 16 D. $32/3$

6. The area enclosed by $x^2+y^2=9$ is:

A. 3π B. 9π C. 18π D. 6π

7. The area enclosed by $x^2/16+y^2/9=1$ is:

A. 25π B. 7π C. 24π D. 12π

8. The area bounded by $y=2x$, $x=0$, $x=3$ and the x-axis is:

A. 18 B. 3 C. 9 D. 6

9. The area between $y=x^2$ and the x-axis on $[-1,1]$ is:

A. $2/3$ B. 0 C. $1/3$ D. 2

10. The area between $y=-x$ and the x-axis on $[0,2]$ is:

A. 2 B. 0 C. 4 D. -2

11. Curves $y=x^2$ and $y=2x$ meet at $x=$:

A. -2 and 2 B. 0 and 2 C. 0 and 1 D. 1 and 2

12. The area enclosed by $y=x^2$ and $y=2x$ is:

A. $2/3$ B. $8/3$ C. 4 D. $4/3$

13. The first-quadrant area under $y=\sqrt{x}$ on $[0,4]$ is:

A. $8/3$ B. 8 C. 4 D. $16/3$

14. The area between $x=y^2$ and $x=4$ is:

A. 16 B. $16/3$ C. $32/3$ D. 8

15. To find area between upper curve $y=f(x)$ and lower $y=g(x)$, use:

A. $\int fg \, dx$ B. $\int (g-f) \, dx$ C. $\int (f-g) \, dx$ D. $\int (f+g) \, dx$

ANSWER KEY — check after completing all 15 questions

1.B 2.A 3.B 4.C 5.D 6.B 7.D 8.C 9.A 10.A 11.B 12.D 13.D 14.C 15.C

Original exam-style practice • Reference notes: www.physics.guru/cbse-practice-papers/ • Not an official paper

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