

Worksheet: Application of Integrals

Kerala State Board · Class 12 · Mathematics · 8 questions · 33 marks

Name: _____

Date: _____

Score: _____ / 33

Q1. Find the area bounded by $y=x^2$, $x=1$, $x=2$, and the x-axis. [3 marks]

Q2. Find the area bounded by $y=x^4$, $x=1$, $x=5$, and the x-axis. [3 marks]

Q3. Find the area of the region bounded by the ellipse $x^2/16+y^2/9=1$. [3 marks]

Q4. Find the area lying in the first quadrant and bounded by the circle $x^2+y^2=4$ and the lines $x=0$ and $x=2$. [4 marks]

Q5. Find the area of the region bounded by the curve $y^2=4x$, the y-axis, and the line $y=3$. [4 marks]

Q6. Find the area of the region bounded by the line $y=3x+2$, the x-axis, and the ordinates $x=-1$ and $x=1$. [5 marks]

Q7. Find the area bounded by the curve $y=\sin x$ between $x=0$ and $x=2\pi$. [6 marks]

Q8. The area bounded by the curve $y=x|x|$, the x -axis, and the ordinates $x=-1$ and $x=1$ is given by which of (A) 0 (B) $\frac{1}{3}$ (C) $\frac{2}{3}$ (D) $\frac{4}{3}$? [5 marks]
