



SUBJECT: MATHEMATICS
CH-8 APPLICATION OF INTEGRATION

Name: _____ Date: _____ Class: _____ Sec: _____

1. Using integration, find the area bounded by the following :

(i) Circle $x^2 + y^2 = 9$

(ii) Ellipse $4x^2 + 9y^2 = 36$

(iii) parabola $y^2 = 12x$, $x = 3$.

(iv) parabola $x^2 = 20y$, $y = 5$

2. Draw a rough sketch of the following and find the area using integration.

(i) $y = |x|$, $x = -2$, $x = 2$

(ii) $y = |x - 2|$, $x = -1$, $x = 5$

(iii) $y = |x + 1|$, $x = -3$ and $x = 5$.

3. Find the area represented by $\{ (x,y) : x^2 \leq y \leq |x| \}$

4. Find the area enclosed by the parabola $x^2 = y$ and the line $y = x + 2$.

5. Find the area bounded by the curve $y = \sin x$ between $x = 0$ and $x = 2\pi$.