**UNIT 3- Application of Integrals**

1. Find the area bounded by the curve $x^2 = 4y$ and the line $x = 4y - 2$

2. Find the area of the region bounded by the curve $y^2 = 4x$ and the line $x = 3$

3. 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. Find the area of the region bounded by $x^2 = 4y$, y = 2, y = 4 and the y-axis in the first quadrant.

5. Find the area of the region bounded by the two parabolas $y = x^2$ and $y^2 = x$

6. Find the area of the circle $4x^2 + 4y^2 = 9$ which is interior to the parabola $x^2 = 4y$.