Sec. 5.4 In Class Worksheet

Name_____

Sec. 5.4 page 411: 11, 13, 21,25,31,37,43,58

1. (Sec. 5.4 #11) Find the general indefinite integral.

$$\int \left(2 - \sqrt{x}\right)^2 dx$$

2. (Sec. 5.4 #13) Find the general indefinite integral.

$$\int \frac{\sin(x)}{1 - \sin^2(x)} dx$$

3. (Sec. 5.4 #21) Evaluate the integral.

$$\int_{-2}^{2} (3u + 1)^2 \, du$$

4. (Sec. 5.4 #25) Evaluate the integral.
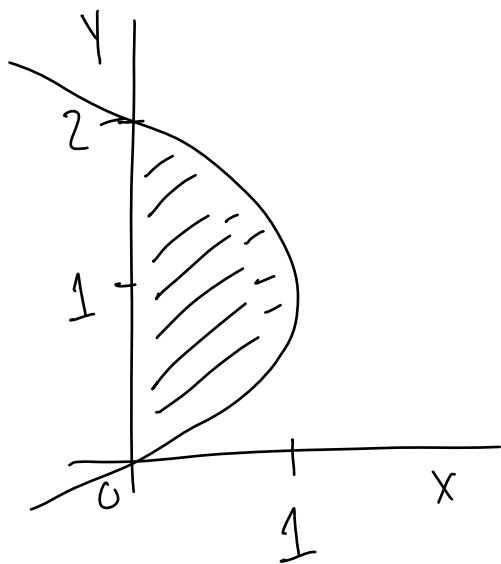
$$\int_{-2}^{-1} \left(4y^3 + \frac{2}{y^3}\right) dy$$

5. (Sec. 5.4 #31) Evaluate the integral.

$$\int_0^\pi 4\sin\theta - 3\cos\theta\, d\theta$$

6. (Sec. 5.4 #37) Evaluate the integral.

$$\int_1^e \frac{x^2 + x + 1}{x}\, dx$$

7. (Sec. 5.4 #43) The area of the region that lies to the right of the y-axis and to the left of the parabola $x = 2y - y^2$. Find the area of this region.

8. (Sec. 5.4 #58) Water flows from the bottom of a storage tank at a rate of $r(t) = 200 - 4t$ liters per minute where $0 \le t \le 50$. Find the amount of water that flows out during the first 10 minutes.