

Evaluate the following

1. $\int x^4 - 3x^3 + \pi \, dx$

2. $\int -\sin(2x) \, dx$

3. $\int e^x + \frac{1}{x} \, dx$

4. $\int 3x^2(x^3 + 3)^5 \, dx$

5. $\int \sec(2x)^2 \, dx$

6. $\int \sec(2x) \tan(2x) \, dx$

7. Find the area of the region bounded by the graphs of $y = 3x + 6$ and $y = x^2 - 2x$

8. $\int_{-2}^2 \sin(x^3 + x) \, dx$

9. $\int \sin(x)e^{\cos(x)} \, dx$

10. $\int x\sqrt{x+1} \, dx$