

Integrate each of the following by hand.

1. $\int_0^4 6x^2 dx$

2. $\int_2^3 \frac{1}{\sqrt{x}} dx$

3. $\int_2^5 x^2 - \pi x dx$

4. $\int_0^4 5e^w dw$

5. $\int_1^{1.5} 5 dx$

6. $\int_1^1 x^2 dx$

$$7. \int_{0.1}^{0.8} 2e^x dx$$

$$8. \int_1^2 w^{5/12} dw$$

$$9. \int_3^5 \frac{1}{x} dx$$

$$10. \int_{10}^{20} \frac{1}{x^2} + \frac{2}{x} dx$$