

Integral-3

Evaluate each integral symbolically (without graphing). Verify your solution using DESMOS.

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

2. $\int_1^4 x^2 dx$

3. $\int_0^3 (3x + 4) dx$

4. $\int_3^6 (3x + 4) dx$

5. $\int_0^6 (3x + 4) dx$

6. $\int_0^1 (x^2 - 2x) dx$

7. $\int_0^3 x^3 dx$

8. $\int_0^2 (x - x^3) dx$

9. $\int_{-a}^a x^2 dx$

10. $\int_{-a}^a x^3 dx$

Answer Key

1. $\frac{64}{3}$

2. 21

3. $\frac{51}{2}$

4. $\frac{105}{2}$

5. 78

6. $-\frac{2}{3}$

7. $\frac{81}{4}$

8. -2

9. $\frac{2}{3}a^3$

10. 0