

Calculus Practice: First Fundamental Theorem of Calculus 1b**Evaluate each definite integral.**

1) $\int_{-2}^1 -2x \, dx$

2) $\int_2^4 (-x - 1) \, dx$

3) $\int_2^7 (x - 2) \, dx$

4) $\int_0^3 (2x - 2) \, dx$

5) $\int_{-4}^1 \left(-\frac{x^2}{2} - 2x + 3 \right) dx$

6) $\int_{-3}^0 \left(\frac{x^2}{2} - 6 \right) dx$

7) $\int_3^4 (x^2 - 6x + 9) \, dx$

8) $\int_{-5}^{-1} \left(\frac{x^2}{2} + 4x + 3 \right) dx$

9) $\int_0^3 (-x^3 + 3x^2) \, dx$

10) $\int_{-1}^3 (x^3 - 2x^2 - 4) \, dx$

$$11) \int_2^3 (x^3 - 2x^2 - 3) dx$$

$$12) \int_4^5 (-x^3 + 11x^2 - 39x + 46) dx$$

$$13) \int_{-2}^2 (-x^4 + 3x^2 - 2x + 1) dx$$

$$14) \int_{-2}^1 (-x^4 - 2x^3 + 2x^2 - 5) dx$$

$$15) \int_{-1}^2 (x^4 - x^3 - 3x^2) dx$$

$$16) \int_{-2}^{-1} (x^4 - 3x^2 + 3x - 1) dx$$

$$17) \int_0^1 (x^5 - 4x^3 + 4x + 1) dx$$

$$18) \int_0^1 (-x^5 + 3x^3 - 3x) dx$$

$$19) \int_{-1}^1 (x^5 - 4x^3 + 5x - 1) dx$$

$$20) \int_{-1}^0 (x^5 - 3x^3) dx$$

Calculus Practice: First Fundamental Theorem of Calculus 1b

Evaluate each definite integral.

1) $\int_{-2}^1 -2x \, dx$

3

2) $\int_2^4 (-x - 1) \, dx$

-8

3) $\int_2^7 (x - 2) \, dx$

 $\frac{25}{2} = 12.5$

4) $\int_0^3 (2x - 2) \, dx$

3

5) $\int_{-4}^1 \left(-\frac{x^2}{2} - 2x + 3 \right) dx$

 $\frac{115}{6} \approx 19.167$

6) $\int_{-3}^0 \left(\frac{x^2}{2} - 6 \right) dx$

 $-\frac{27}{2} = -13.5$

7) $\int_3^4 (x^2 - 6x + 9) \, dx$

 $\frac{1}{3} \approx 0.333$

8) $\int_{-5}^{-1} \left(\frac{x^2}{2} + 4x + 3 \right) dx$

 $-\frac{46}{3} \approx -15.333$

9) $\int_0^3 (-x^3 + 3x^2) \, dx$

 $\frac{27}{4} = 6.75$

10) $\int_{-1}^3 (x^3 - 2x^2 - 4) \, dx$

 $-\frac{44}{3} \approx -14.667$

$$11) \int_2^3 (x^3 - 2x^2 - 3) dx$$
$$\frac{7}{12} \approx 0.583$$

$$12) \int_4^5 (-x^3 + 11x^2 - 39x + 46) dx$$
$$\frac{23}{12} \approx 1.917$$

$$13) \int_{-2}^2 (-x^4 + 3x^2 - 2x + 1) dx$$
$$\frac{36}{5} = 7.2$$

$$14) \int_{-2}^1 (-x^4 - 2x^3 + 2x^2 - 5) dx$$
$$-\frac{81}{10} = -8.1$$

$$15) \int_{-1}^2 (x^4 - x^3 - 3x^2) dx$$
$$-\frac{123}{20} = -6.15$$

$$16) \int_{-2}^{-1} (x^4 - 3x^2 + 3x - 1) dx$$
$$-\frac{63}{10} = -6.3$$

$$17) \int_0^1 (x^5 - 4x^3 + 4x + 1) dx$$
$$\frac{13}{6} \approx 2.167$$

$$18) \int_0^1 (-x^5 + 3x^3 - 3x) dx$$
$$-\frac{11}{12} \approx -0.917$$

$$19) \int_{-1}^1 (x^5 - 4x^3 + 5x - 1) dx$$
$$-2$$

$$20) \int_{-1}^0 (x^5 - 3x^3) dx$$
$$\frac{7}{12} \approx 0.583$$