

Assignment: Integration of radicals

Date _____

Evaluate each indefinite integral.

1) $\int \left(12x^5 + 15x^4 + \frac{25\sqrt[3]{x^2}}{3} \right) dx$

2) $\int \left(\frac{14\sqrt[5]{x^2}}{5} - \frac{25\sqrt[4]{x}}{4} + 2 \right) dx$

3) $\int \left(4x^3 + \frac{20\sqrt[3]{x^2}}{3} - 6\sqrt[5]{x} \right) dx$

4) $\int \left(6x^2 + \frac{20\sqrt[3]{x^2}}{3} + \frac{18\sqrt[5]{x}}{5} \right) dx$

5) $\int \left(8x + \frac{10\sqrt[3]{x^2}}{3} + \frac{28\sqrt[5]{x^2}}{5} \right) dx$

6) $\int \left(8x^3 - \frac{20\sqrt[3]{x^2}}{3} + \frac{5\sqrt[4]{x}}{2} \right) dx$

7) $\int (24x^5 - 4x^3 + 1) dx$

8) $\int \left(-20x^3 + 10x + \frac{20\sqrt[3]{x}}{3} \right) dx$

9) $\int \left(-4x - \frac{20\sqrt[3]{x}}{3} - \frac{5\sqrt[4]{x}}{4} \right) dx$

10) $\int \left(15x^4 + \frac{10\sqrt[3]{x^2}}{3} + \frac{5\sqrt[4]{x}}{4} \right) dx$

Answers to Assignment: Integration of radicals

$$1) 2x^6 + 3x^5 + 5x^{\frac{5}{3}} + C$$

$$4) 2x^3 + 4x^{\frac{5}{3}} + 3x^{\frac{6}{5}} + C$$

$$7) 4x^6 - x^4 + x + C$$

$$10) 3x^5 + 2x^{\frac{5}{3}} + x^{\frac{5}{4}} + C$$

$$2) 2x^{\frac{7}{5}} - 5x^{\frac{5}{4}} + 2x + C$$

$$5) 4x^2 + 2x^{\frac{5}{3}} + 4x^{\frac{7}{5}} + C$$

$$8) -5x^4 + 5x^2 + 5x^{\frac{4}{3}} + C$$

$$3) x^4 + 4x^{\frac{5}{3}} - 5x^{\frac{6}{5}} + C$$

$$6) 2x^4 - 4x^{\frac{5}{3}} + 2x^{\frac{5}{4}} + C$$

$$9) -2x^2 - 5x^{\frac{4}{3}} - x^{\frac{5}{4}} + C$$

