

INTEGRATES.

Q

$$\int \frac{2x^4 + 3x^3 + 2x^2 + x + 5}{3x} dx$$

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

$$\int \frac{2x^3}{3} + x^2 + \frac{2}{3}x + \frac{1}{3} + \frac{5}{3x}$$

$$\frac{2}{3} \int \frac{x^{3+1}}{3+1} + \int \frac{x^{2+1}}{2+1} + \frac{2}{3} \int \frac{x^{1+1}}{1+1} + \frac{1}{3} \int dx + \frac{5}{3} \int \frac{x^{-1+1}}{-1+1} + C.$$

$$\frac{2}{3} \int \frac{x^4}{4} + \int \frac{x^3}{3} + \frac{2}{3} \int \frac{x^2}{2} + \frac{1}{3} \int x + \frac{5}{3} \int \ln|x| + C.$$

$$\frac{2}{3} \frac{1}{4} x^4 + \frac{x^3}{3} + \frac{2}{3} \frac{1}{2} x^2 + \frac{1}{3} x + C$$

$$\frac{2}{12} x^4 + \frac{x^3}{3} + \frac{2}{6} x^2 + \frac{1}{3} x + C = \frac{x^4}{6} + \frac{x^3}{3} + \frac{x^2}{3} + \frac{x}{3} + C$$

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

$$\int 8^6 dx \quad 8 \int x^6 dx = 8 \int \frac{x^{6+1}}{6+1} + C = \frac{8x^7}{7} + C$$

$$2 \int x^4 dx = 2 \int \frac{x^{4+1}}{4+1} + C = \frac{2x^5}{5} + C = \frac{2x^5}{5} + C$$

$$3 \int x^4 dx = 3 \int \frac{x^{4+1}}{4+1} + C = 3 \cdot \frac{x^5}{5} = \frac{3x^5}{5} + C.$$

$$\int 2x^3 dx = 2 \int x^3 dx = 2 \int \frac{x^{3+1}}{3+1} + C = \frac{2x^4}{4} + C = \frac{x^4}{2} + C$$

$$\int 4x^2 dx \quad 4 \int x^2 dx$$

$$\int 3x^4 dx \quad 3 \int x^4 dx =$$

$$\int 5x^3 dx \quad 5 \int \frac{x^{3+1}}{3+1} + C = 5 \int \frac{x^4}{4} + C$$

$$\int 4x^3 dx \quad 4 \int x^3 dx = 4 \int \frac{x^{3+1}}{3+1} + C = 4 \int \frac{x^4}{4} + C$$

$$\int 3x^2 dx \quad 3 \int x^2 dx = 3 \int \frac{x^{2+1}}{2+1} + C = \frac{3x^3}{3} + C = x^3 + C$$

$$\int 4x dx \quad 4 \int x dx = 4 \int \frac{x^{1+1}}{1+1} + C = 4 \int \frac{x^2}{2} + C = 2x^2 + C$$

$$\int 5x^5 dx \quad 5 \int \frac{x^{5+1}}{5+1} + C = 5 \int \frac{x^6}{6} + C = \frac{5x^6}{6} + C$$

$$\int 7x^2 dx \quad 7 \int \frac{x^{2+1}}{2+1} + C = 7 \int \frac{x^3}{3} + C = \frac{7x^3}{3} + C$$

$$\int x^5 dx = \frac{x^{5+1}}{5+1} + C = \frac{x^6}{6} + C$$

$$\int x^{-3} dx = \frac{x^{-3+1}}{-3+1} + C = \frac{x^{-2}}{-2} + C = -\frac{1}{2x^2} + C$$

$$\int x^{-7} dx = \frac{x^{-7+1}}{-7+1} + C = \frac{x^{-6}}{-6} + C = -\frac{1}{6x^6} + C$$

$$\int x^{-9} dx = \frac{x^{-9+1}}{-9+1} + C = \frac{x^{-8}}{-8} + C = -\frac{1}{8x^8} + C$$

$$\int x^{15} dx = \frac{x^{15+1}}{15+1} + C = \frac{x^{16}}{16} + C$$

$$\int x^{-20} dx = \frac{x^{-20+1}}{-20+1} + C = \frac{x^{-19}}{-19} + C = -\frac{1}{19x^{19}} + C$$

$$\int x^{-11} dx = \frac{x^{-11+1}}{-11+1} + C = \frac{x^{-10}}{-10} + C = -\frac{1}{10x^{10}} + C$$

$$\int x^{-13} dx = \frac{x^{-13+1}}{-13+1} + C = \frac{x^{-12}}{-12} + C = -\frac{1}{12x^{12}} + C$$

$$\int x^{-6} dx = \frac{x^{-6+1}}{-6+1} + C = \frac{x^{-5}}{-5} + C = -\frac{1}{5x^5} + C$$