

$$u) \int (ax^2 + bx + c) dx$$

$$\frac{ax^{2+1}}{2+1} + \frac{bx^{1+1}}{1+1} + \underline{cx}$$

$$\frac{ax^3}{3} + \frac{bx^2}{2} + cx + c$$

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$$v) \int (\sqrt{x} - \frac{1}{\sqrt{x}}) dx$$

$$x^{1/2} = \frac{x^{1/2 + 2/2}}{1/2 + 2/2}$$

$$\frac{x^{3/2}}{3/2} = \frac{2x^{3/2}}{3} - \frac{x^{1/2 + 2/2}}{-1/2 + 2/2} = \frac{x^{1/2}}{1/2} = \frac{2x^{1/2}}{1}$$

$$2x \frac{3/2}{3} - 2x^{1/2} + c$$

$$R) \int (8x^4 + 4x^3 - 6x^2 - 8) dx$$

$$\frac{8x^{4+1}}{4+1} + \frac{4x^{3+1}}{3+1} - \frac{6x^{2+1}}{2+1} - \frac{8x}{1}$$

$$\frac{8x^5}{5} + \frac{4x^4}{4} - \frac{6x^3}{3} - \frac{8x}{1}$$

$$8x^5 + x^4 - 2x^3 - 8x + C$$

$$S) \int (2 + 3x^2 - 8x^3) dx \quad 2x + x^3 - 2x^4 + C$$

$$\frac{2x}{1} + \frac{3x^{2+1}}{2+1} - \frac{8x^{3+1}}{3+1}$$

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

$$T) \int \sqrt[3]{x} (x+1) dx$$

$$x^{4/3 + 3/3} = \frac{x^{7/3}}{7/3} = \frac{3x^{7/3}}{7} + \frac{x^{1/3 + 3/3}}{1/3 + 3/3}$$

$$\left[ \frac{3x^{7/3}}{7} + \frac{3x^{4/3}}{4} + C \right] \quad \frac{x^{4/3}}{4} = \frac{3x^{4/3}}{4}$$

$$1) \int \frac{2}{\sqrt[3]{x}} dx = 2 \int x^{-1/3} dx \rightarrow (2) x^{\frac{-1/3 + 3/3}{-1/3 + 3/3}}$$

$$(2) \frac{x^{2/3}}{2/3} = -\frac{6x^{2/3}}{4} + C - \frac{6x^{4/3}}{2} + C =$$

$$3x^{2/3} + C$$

$$2) \int 6t^2 \sqrt[3]{t} dt$$

$$\int 6t^2 t^{1/3} dt = t^2 = 6/3 + 1/3$$

$$\int 6t^{7/3} dt \rightarrow 6 \int t^{7/3} dt$$

$$= (6) \frac{t^{7/3 + 3/3}}{10/3} = \frac{6t^{10/3}}{10/3} = \frac{18t^{10/3}}{10}$$

$$= \frac{9}{5} t^{10/3} + C$$