

Lenovo

$$\int u^n du = \frac{u^{n+1}}{n+1} + C$$
$$u = 3x-5 \quad du = 3dx$$

$$\int (3x-5)^6 dx = \frac{1}{3} \int (3x-5)^6 \cdot 3dx = \frac{1}{3} \cdot \frac{(3x-5)^7}{7} + C$$

$$\int \sec^2(3x^2) dx = \frac{1}{6} \int \sec^2(3x^2) \cdot 6dx = \frac{1}{6} \tan(3x^2) + C$$

$$u = 3x^2 \quad du = 6dx$$
$$\int \sqrt{4x-3} dx = \int (4x-3)^{1/2} dx = \frac{1}{4} \int (4x-3)^{1/2} \cdot 4dx = \frac{1}{4} \cdot \frac{(4x-3)^{3/2}}{3/2} + C = \frac{2}{9} \cdot \frac{(4x-3)^{3/2}}{3} + C$$

$$\int e^{6x-4} dx = \int e^{6x-4} \cdot \frac{1}{6} \cdot 6dx = \frac{1}{6} e^{6x-4} + C$$

$$\int \left(\frac{2}{3}x^3 + 5x^2 \right) dx = \left(\frac{2}{3} \right) \frac{x^4}{4} + \frac{5x^3}{3} + C = \frac{2x^4}{6} + \frac{5x^3}{3} + C$$

$$\int (\sqrt{x} + x) dx = \int x^{1/2} + x dx = \frac{x^{3/2}}{3/2} + \frac{x^2}{2} + C = \frac{2x^{3/2}}{3} + \frac{x^2}{2} + C$$

$$\int (12h^2 + 6h^3) dh = \frac{12h^3}{3} + \frac{6h^4}{4} + C = 4h^3 + \frac{3}{2}h^4 + C$$

$$dv = (12h^2 + 6h^3) dh$$

$$\int dy = \int 3 \sin x dx \quad \int 3 \sin x dx = 3(-\cos x) + C = -3 \cos x + C$$

$$\int 3 \sin(3x^2) x dx = \frac{1}{2} \int 6 \sin(3x^2) x dx = \frac{1}{2} \int 6 \sin u \frac{1}{2} du = \frac{1}{2} \int 3 \sin u du = -\frac{3}{2} \cos u + C = -\frac{3}{2} \cos(3x^2) + C$$

$$\int \frac{8(1-x^2)^5}{(1-x^2)^6} dx = \int \frac{8(1-x^2)^5}{(1-x^2)^6} dx = \int \frac{8}{1-x^2} dx = \frac{8}{-2} \ln|1-x^2| + C = -4 \ln|1-x^2| + C$$

