

INTEGRATION WORKSHEET

1) $\int \frac{u}{4-u^2} du$

$$\int \frac{x^2+x+1}{x} dx$$

$$\int_0^1 \frac{x}{\sqrt{4-x^2}} dx$$

2) $\int \frac{2x+1}{x^2+4} dx$

$$\int \frac{\cos(x)}{1+\sin^2(x)} dx$$

$$\int \frac{\arctan(y)}{1+y^2} dy$$

3) $\int \frac{\sqrt{9-x^2}}{x} dx$

$$\int \frac{x^2}{\sqrt{x^2-4}} dx$$

$$\int \frac{1}{x\sqrt{x^2+1}} dx$$

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

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

$$\int \frac{1}{9s^2-1} ds$$

5) $\int \ln(t+1) dt$

$$\int \sin^{-1}(x) dx$$

$$\int t \sin(t) dt$$

6) $\int \tan^2(p) dp$

$$\int \sin^2(x) \cos^2(x) dx$$

$$\int \sec(x) \tan^3(x) dx$$

7) $\int \frac{1}{x^3-x} dx$

$$\int \frac{1}{s(s-1)^3} ds$$

$$\int \frac{x}{x^4-1} dx$$

9) $\int_{-\infty}^{\infty} x e^{-x^2} dx$

$$\int_0^4 \frac{1}{\sqrt{y}} dy$$

$$\int_{-1}^2 \frac{1}{x^2} dx$$

9) $\int \frac{\cosh(x)}{\sqrt{\sinh(x)}} dx$

$$\int_0^1 \sinh^2(x) dx$$

$$\int_1^2 \sinh(\ln(x)) dx$$