

Integration

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

$$\text{let } \mu = (x^2 + 5)$$

$$= \int \frac{x+5}{\mu} \frac{d\mu}{2x}$$

$$= \frac{1}{2} \int \frac{5}{\mu} d\mu$$

$$= \frac{5}{2} \int \frac{1}{\mu} d\mu$$

$$= \frac{5}{2} \int \frac{1}{(x^2+5)} dx$$

$$= \frac{5}{2} \ln(x^2 + 5) + C$$

$$\therefore \int \frac{(x+5)}{(x^2+5)} dx = \frac{5}{2} \ln(x^2 + 5) + C$$