

Full name(s): _____ .

Questions

1. Evaluate the following integrals:

(a) $\int x^2 \sin(3x) dx$

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

(c) $\int \frac{\ln(x)}{x} dx$

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

(e) $\int \frac{3x-4}{x^2+2x+4} dx$

(f) $\int \frac{3^x}{1+3^x} dx$

(g) $\int \frac{1}{\sqrt{4-x^2}} dx$

(h) $\int \sqrt{\frac{x+2}{x-1}} dx$

(i) $\int \frac{4e^{3x}}{1+e^{2x}} dx$

(j) $\int \frac{1}{\sqrt{\sin(x) \cos^3(x)}} dx$

(k) $\int \frac{x^3}{\sqrt{4+x^2}} dx$

(l) $\int \frac{\tan(x) \sin(x)}{d} x$

(m) $\int \frac{\tan^2(x)+1}{\tan^3(x)-\tan^2(x)} \sec^2(x) dx$