

Find the following integrals, and *check your answers!!*

1. $\int \frac{1}{\sqrt{1-x}} dx$ ($u = 1 - x$)

2. $\int x \sin(\pi x^2) dx$ ($u = \pi x^2$)

3. $\int_1^3 \frac{x}{1+x^2} dx$ ($u = 1 + x^2$)

4. $\int \frac{e^{\sqrt{x+1}}}{\sqrt{x+1}} dx$ ($u = \sqrt{x+1}$)

5. $\int_2^5 \frac{1}{x \ln(x)} dx$ ($u = \ln(x)$)

6. $\int \sin(x) e^{\cos(x)} dx$

7. $\int x^2 \sec(x^3) \tan(x^3) dx$