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

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

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

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

4. $\displaystyle \int \frac{x}{1+x^4} \, dx \qquad (u = x^2)$

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