Choose the correct answer

$$\int_0^1 \frac{2x}{\sqrt{x^2+2}}dx \text{ and } u = x^2 + 2 \text{ then}$$

a) $\frac{1}{2}\int_2^3 u^{\frac{-1}{2}}du$ b) $2\int_2^3 u^{\frac{-1}{2}}du$ c) $\int_2^3 u^{\frac{-1}{2}}du$

d) $\int_0^1 u^{\frac{-1}{2}}du$ e) $2\int_0^1 u^{\frac{-1}{2}}du$

Evaluate the integrals

2. $\int (4x-3)^9 dx$

3. $\int \cos(2x)\sin^5(2x)dx$

4. $\int \frac{1}{1+16x^2}dx$

5. $\int \frac{x^2+1}{\sqrt{x^3+3x}}dx$

6. $\int \frac{x}{1+16x^2}dx$