

Choose the correct answer

Use the substitution $u = x^2 - 3$ to rewrite $\int_{-1}^4 x(x^2 - 3)^5 dx$

a) $2 \int_{-2}^{13} u^5 du$ b) $\int_{-2}^{13} u^5 du$ c) $\frac{1}{2} \int_{-2}^{13} u^5 du$

d) $\int_{-1}^4 u^5 du$ e) $\frac{1}{2} \int_{-1}^4 u^5 du$

Evaluate the integrals

$$2. \int \frac{\csc^2 x}{\sqrt{\cot x}} dx$$

$$3. \int \frac{e^{3x}}{1 - e^{3x}} dx$$

$$4. \int \frac{1}{36 + x^2} dx$$

$$5. \int \frac{2x}{36 + x^2} dx$$

$$6. \int x \cos(4x) dx$$

$$7. \int x^2 \ln x dx$$