Substitution with change of variables

Express each definite integral in terms of u, but do not evaluate.

1) $\displaystyle\int_0^1 \frac{8x}{(4x^2+2)^2}\,dx;\ u = 4x^2 + 2$

A) $\displaystyle\int_2^8 \frac{1}{u^2}\,du$ B) $\displaystyle\int_2^6 \frac{1}{u^2}\,du$

C) $\displaystyle\int_7^{-1} \frac{1}{u^2}\,du$ D) $\displaystyle\int_2^4 \frac{1}{u^2}\,du$

2) $\displaystyle\int_{-1}^0 4x(2x^2-2)^3\,dx;\ u = 2x^2 - 2$

A) $\displaystyle\int_0^5 u^3\,du$ B) $\displaystyle\int_0^4 u^3\,du$

C) $\displaystyle\int_0^{-2} u^3\,du$ D) $\displaystyle\int_7^4 u^3\,du$

3) $\displaystyle\int_{-2}^0 \frac{18x}{(3x^2+2)^2}\,dx;\ u = 3x^2 + 2$

A) $\displaystyle\int_{14}^8 \frac{3}{u^2}\,du$ B) $\displaystyle\int_{14}^4 \frac{3}{u^2}\,du$

C) $\displaystyle\int_7^2 \frac{3}{u^2}\,du$ D) $\displaystyle\int_{14}^2 \frac{3}{u^2}\,du$

4) $\displaystyle\int_{-1}^2 6x(x^2-3)^2\,dx;\ u = x^2 - 3$

A) $\displaystyle\int_{-2}^4 3u^2\,du$ B) $\displaystyle\int_{-2}^1 3u^2\,du$

C) $\displaystyle\int_{-11}^1 3u^2\,du$ D) $\displaystyle\int_{-2}^{-7} 3u^2\,du$

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