SUBSTITUTION (7.1) NAME_____

Evaluate the following integrals exactly using the substitution method. Use proper notation.

1. $\int \cos^2\left(\frac{\theta}{5}\right)\sin\left(\frac{\theta}{5}\right)d\theta$

$u =$

$du =$

2. $\int (t+1)e^{5t+5}dt$

$u =$

$du =$

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

$u =$

$du =$

4. If $\int_0^3 \frac{1}{1+y^2}dy = k$, find $\int_0^1 \frac{1}{1+9x^2}dx$ in terms of k.

$u =$

$du =$

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