
\[ \int \frac{x + 2}{x^3 + x} \]
2. Evaluate.
\[
\int e^{\sqrt{2x}} \, dx
\]

3. The following integral can be evaluated with a trigonometric substitution. Specify an appropriate substitution, both \( x \) and \( dx \). However, it should not be evaluated in that way. Instead, choose a different method to evaluate the integral.\(^1\)

\[
\int \frac{2x}{(4 - x^2)^{3/2}} \, dx
\]

\( x = \underline{\phantom{0000}} \), so \( dx = \underline{\phantom{0000}} \).

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\(^1\)I hope you didn’t get a ‘Trig Sub ♥ 4 Life’ tattoo over the weekend; it isn’t always the best way to evaluate integrals.