

7.1 Integration by Substitution

Group Work Target Practice

Evaluate each of the following integrals in groups of two or three.

For one of the integrals it is not possible to find an antiderivative using any method, so identify which one this is.

For one of the integrals substitution won't work, but a method from calculus 1 will.

Two can be done using substitution—show me: w , dw , \int with respect to w [Hint: Try to find w so that dw is in \int . It is often helpful to choose w “inside” of some other function]

1. $\int \sin(x) \cos(x) dx$

2. $\int_0^2 e^{x^2} dx$

3. $\int_1^4 \frac{2x-3}{x^2} dx$

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

7.1 Integration by Substitution

Group Work Target Practice

Evaluate each of the following integrals in groups of two or three.

For one of the integrals it is not possible to find an antiderivative using any method, so identify which one this is.

For one of the integrals substitution won't work, but a method from calculus 1 will.

Two can be done using substitution—show me: w , dw , \int with respect to w [Hint: Try to find w so that dw is in \int . It is often helpful to choose w “inside” of some other function]

1. $\int \sin(x) \cos(x) dx$

2. $\int_0^2 e^{x^2} dx$

3. $\int_1^4 \frac{2x-3}{x^2} dx$

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