

A definite integral is one which has an upper limit, b , and a lower limit, a .

It does not require a constant of integration, plus c .

Evaluate the definite integral $\int_1^2 \frac{1}{x^2} dx$ for the limit values one and two.

First, using rules of indices rewrite one over x squared as a negative power, x to the power of negative two.

Second, integrate the function with respect x using the rule add one to the power and divide by the new power.

This becomes x to the power of negative one divided by negative one, to become negative x to the power of negative one.

Substitute the biggest value into the integral first, then the smallest and subtract the answers from each other.

Negative two to the power of negative one is negative a half and negative one to the power of negative one is negative one.

The final value is negative a half subtract negative one, which is plus one.

So, this equals a half.