

(Confluent) Hypergeometric functions

```
maxima('integrate(bessel_j(2, x), x)').sage()
```

$$\frac{1}{24} x^3 {}_1F_2\left(\frac{3}{2}; \frac{5}{2}, 3; -\frac{1}{4} x^2\right)$$

```
sum(((2*I)^x/(x^3 + 1)*(1/4)^x), x, 0, oo)
```

$${}_4F_3\left(\begin{matrix} 1, 1, -\frac{1}{2}i\sqrt{3} - \frac{1}{2}, \frac{1}{2}i\sqrt{3} - \frac{1}{2} \\ 2, -\frac{1}{2}i\sqrt{3} + \frac{1}{2}, \frac{1}{2}i\sqrt{3} + \frac{1}{2} \end{matrix}; \frac{1}{2}i\right)$$

#第一種合流型超幾何関数の簡略化

```
hypergeometric_M(1, 1, x).simplify_hypergeometric()
```

$$e^x$$

#第二種合流型超幾何関数の簡略化

```
hypergeometric_U(1, 1, x).simplify_hypergeometric();
```

$$\frac{{}_2F_0\left(1, 1; -\frac{1}{x}\right)}{x}$$

#第一種合流型超幾何関数の値

```
hypergeometric_M(1, 1, 1).n(70)
```

$$2.7182818284590452354$$

#第二種合流型超幾何関数の値

```
hypergeometric_U(1, 1, 1).n(70)
```

$$0.59634736232319407434$$