```
var('x')
q(x)=(x-1)/((x+1)*(x-2))
q(x).partial_fraction()
integrate(q(x),x)
```

$$\frac{2}{3}\log(x+1) + \frac{1}{3}\log(x-2)$$

```
var('x')
q(x)=(2*x-1)/(x^3-2*x^2)
print q(x).partial_fraction()
integrate(q(x),x)
```

3/4/(x - 2) - 3/4/x + 1/2/x^2

$$-\frac{1}{2x} + \frac{3}{4}\log(x-2) - \frac{3}{4}\log(x)$$

```
var('x')
q(x)=(x+1)/(x^2+x+1)
print q(x).partial_fraction()
integrate(q(x),x)
```

(x + 1)/(x^2 + x + 1)

$$\frac{1}{3}\sqrt{3}\arctan\left(\frac{1}{3}\sqrt{3}(2x+1)\right) + \frac{1}{2}\log(x^2+x+1)$$