In [1]:
```
numerator(x)=x^2-1
denominator(x)=x^2+1
f(x)=numerator(x)/denominator(x)
show(f)
```

Out[1]:

$$x \mapsto \frac{x^2-1}{x^2+1}$$

In [2]:
```
fddash(x)=diff(f(x),x,2).factor()
show(fddash)
```

Out[2]:

$$x \mapsto -\frac{4\left(3\,x^2-1\right)}{\left(x^2+1\right)^3}$$

In [3]:
```
maxima_calculus('algebraic: true;')
```

Out[3]:
```
true
```

In [4]:
```
show(solve(fddash(x)==0,x))
```

Out[4]:

$$\left[x=-\frac{1}{3}\sqrt{3}, x=\frac{1}{3}\sqrt{3}\right]$$

In [5]:
```
pt1x=solve(fddash(x)==0,x)[0].rhs()
pt2x=solve(fddash(x)==0,x)[1].rhs()
```

In [6]:
```
pt1y=f(solve(fddash(x)==0,x)[0].right()).canonicalize_radical()
show(pt1y)
```

Out[6]:

$$-\frac{1}{2}$$

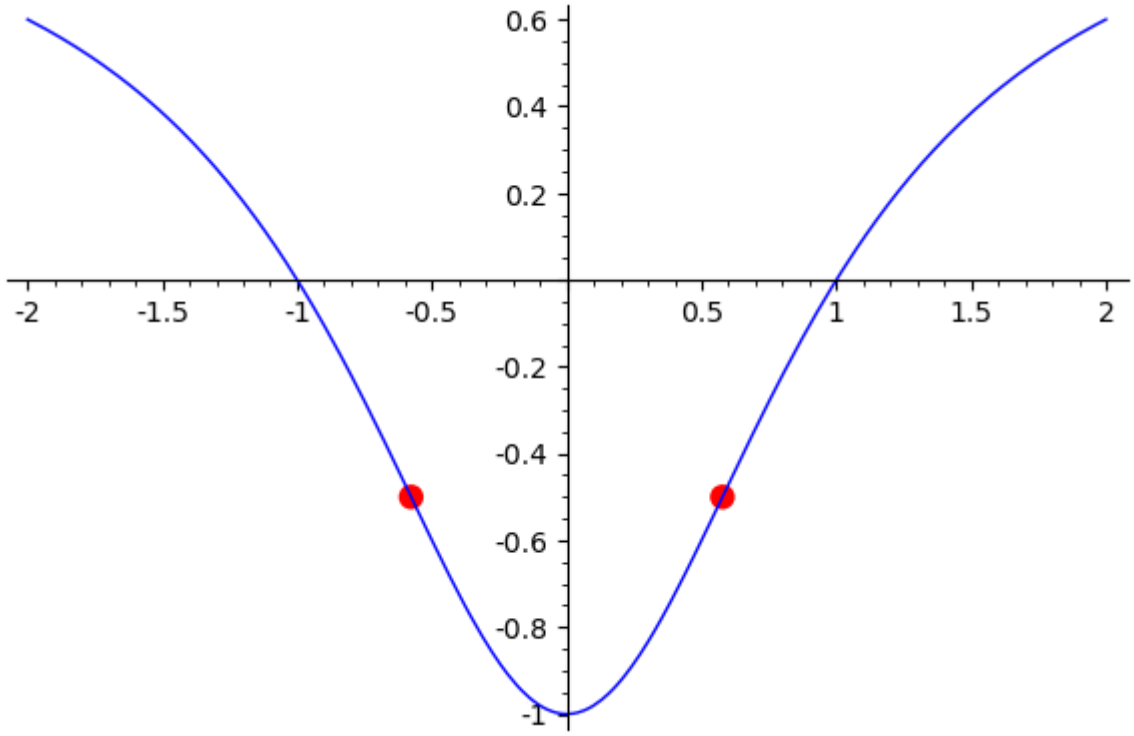
In [7]:
```
pt2y=f(solve(fddash(x)==0,x)[1].right()).canonicalize_radical()
show(pt2y)
```

Out[7]:

$$-\frac{1}{2}$$

In [8]:
```
p1=plot(f(x),x,-2,2)
pt1 = point((pt1x,pt1y), rgbcolor='red', pointsize=80)
pt2 = point((pt2x,pt2y), rgbcolor='red', pointsize=80)
p1+pt1+pt2
```

Out[8]:



In [0]: