In [1]:

```
f(x)=cos(x)
g(x)=sin(2*x)
show(integrate(abs(f(x)-g(x)),x,0,pi/2))
```

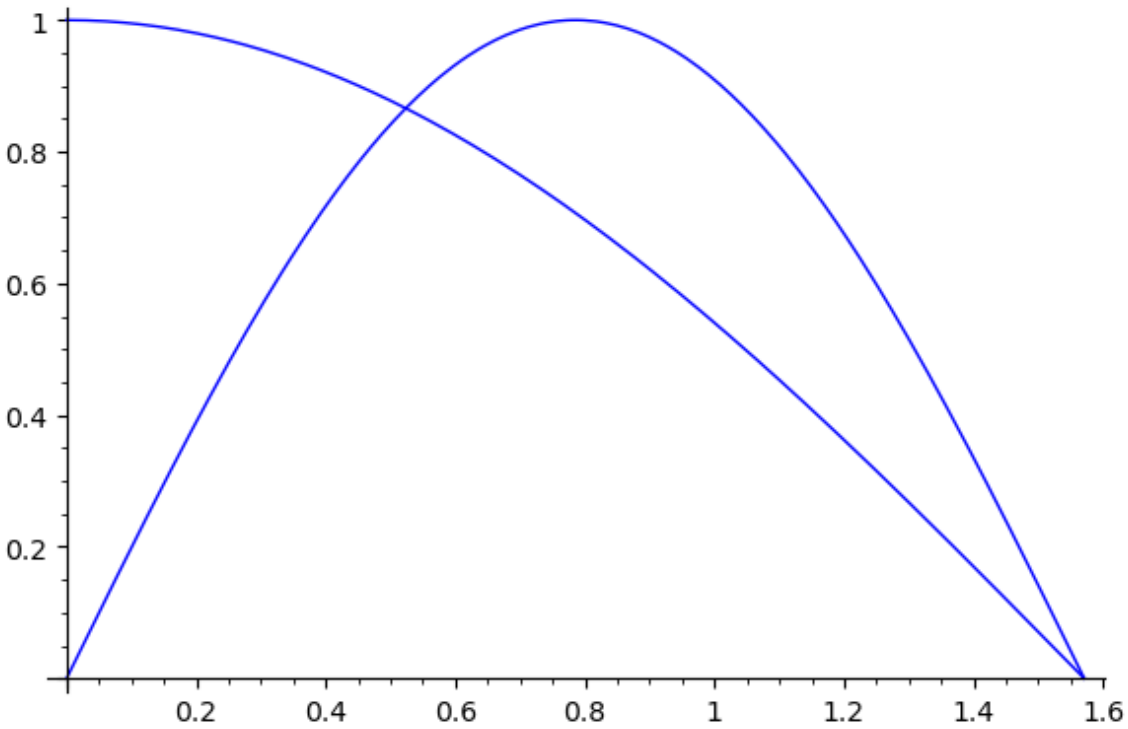
Out[1]:

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

In [2]:

```
p1=plot(f(x),x,0,pi/2)
p2=plot(g(x),x,0,pi/2)
(p1+p2).show(xmin=0, xmax=pi/2, ymin=0, ymax=1)
```

Out[2]:



In [3]:

```
show(find_root(f(x)==g(x),0,pi/2))
```

Out[3]:

0.5235987755982989

In [4]:

```
# double check
show(RR(pi/6))
```

Out[4]:

0.523598775598299

In [5]:

```
show(integrate(f(x)-g(x),x,0,pi/6))
```

Out[5]:

$$\frac{1}{4}$$

In [6]:

```
show(integrate(g(x)-f(x),x,pi/6,pi/2))
```

Out[6]:

$$\frac{1}{4}$$

In [0]:

```

```