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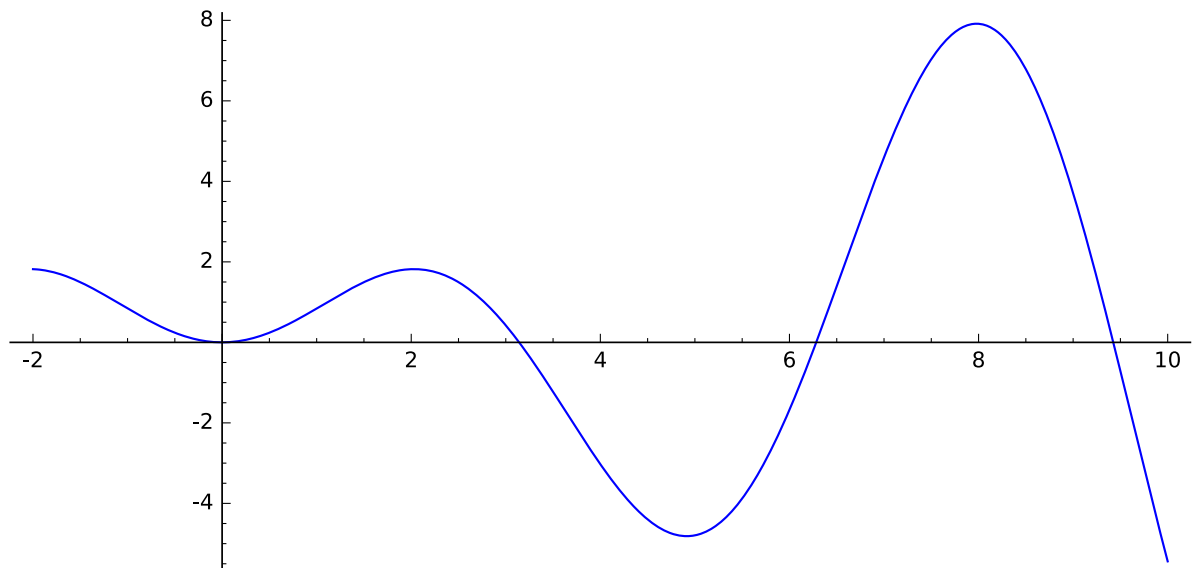
3/21/2016

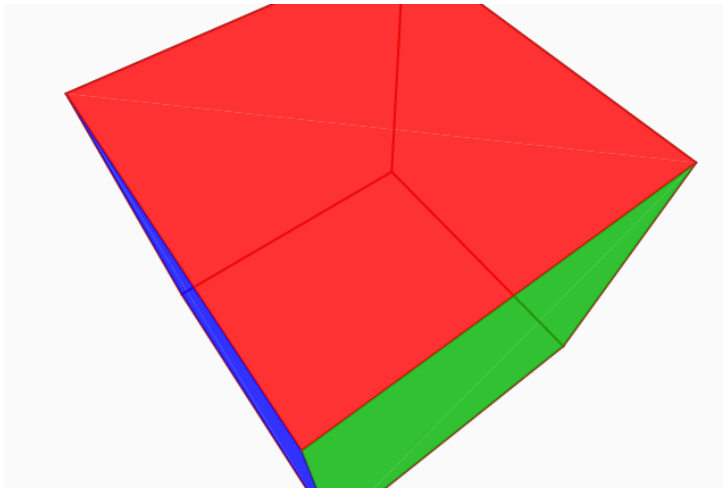
```
factorial(20)  
2432902008176640000
```

```
fibonacci(450)  
495396701187506647316252492523160404772779187134606100115055174731359385136651721489925728  
0600
```

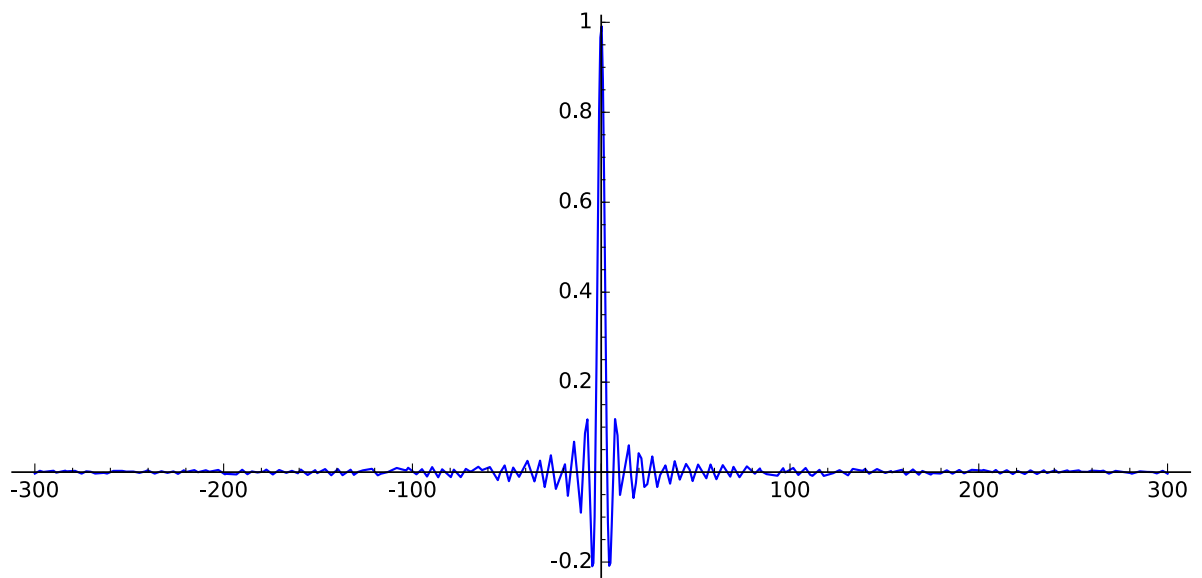
```
fibonacci(450)/fibonacci(449).n()  
1.61803398874989
```

```
plot(x * sin(x), (x, -2, 10))  
show(cube(color=['red', 'blue', 'green'], frame_thickness=2,  
          frame_color='brown', opacity=0.8), frame=False)
```

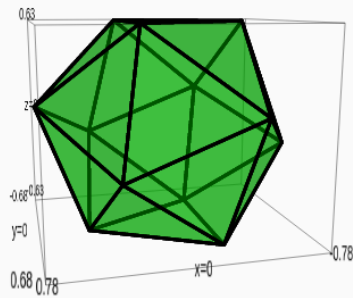




```
plot(sin(x)/x,(x,-300,300))
```



```
show(icosahedron(color='green', opacity=.5, mesh=3), spin=1)
```



```
show(dodeahedron(color='green', opacity=.5, mesh=3), spin=1)
```

Error in lines 1-1

Traceback (most recent call last):

File ‘‘/projects/sage/sage-6.10/local/lib/python2.7/site-packages/smc_sagews/sage_server.py’’, line 905, in execute
 exec compile(block+'\n', '', 'single') in namespace, locals

File ‘‘’’, line 1, in <module>

NameError: name 'dodeahedron' is not defined

```
graphs.PetersenGraph()
```

Petersen graph: Graph on 10 vertices

```
show(graphs.PetersenGraph())
```

```
expand((x+10)^3)
```

$x^3 + 30x^2 + 300x + 1000$

```
var('y')
```

y

```
expand((x+y)^10)
```

$x^{10} + 10x^9y + 45x^8y^2 + 120x^7y^3 + 210x^6y^4 + 252x^5y^5 + 210x^4y^6 + 120x^3y^7 + 45x^2y^8 + 10xy^9 + y^{10}$

```
f(x,y)=(x+y)^20
```

```
f(1,1)
```

1048576

$f(1, 2)$
3486784401

2^{20}
1048576

3^{20}
3486784401