PLOT Just about any math equation !!!

- ALGEBRA

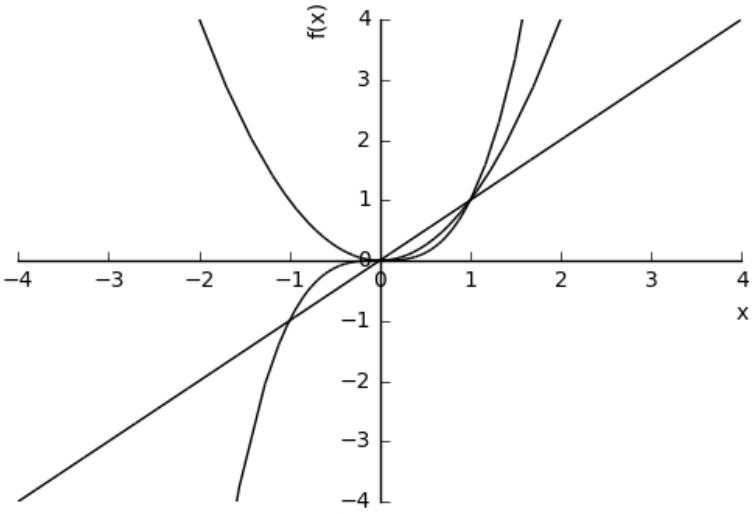
- TRIGONOMETRY

In [2]:
```
from sympy import *
init_printing()
from matplotlib import style
#style.use('grayscale')
```

In [3]:
```
x, y, z = symbols("x, y, z")
```

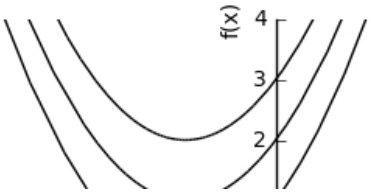
In [4]:
```
a, b,c,d = symbols ('a b c d')
```

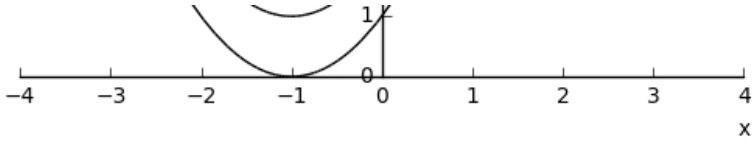
In [5]:
```
plot(x,x**2,x**3, xlim=(-4,4),ylim=(-4,4))
```



Out[5]: <sympy.plotting.plot.Plot at 0x1983eb1bba8>

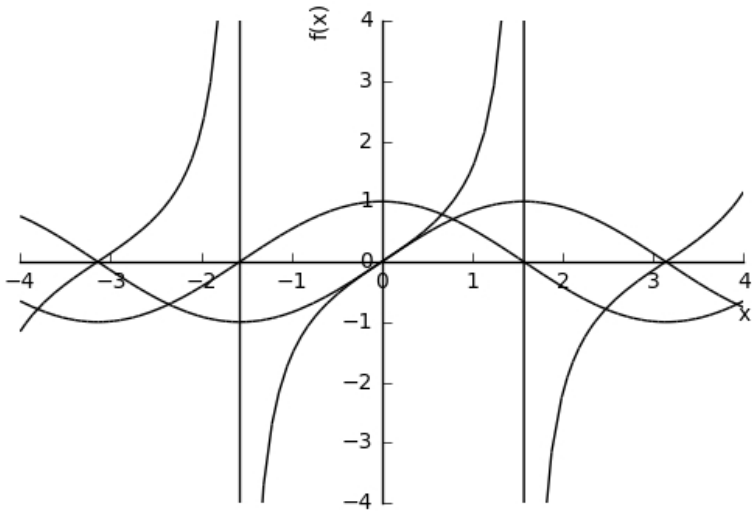
In [6]:
```
plot(x**2+2*x+1,x**2+2*x+2,x**2+2*x+3,  xlim=(-4,4),ylim=(-4,4))
```





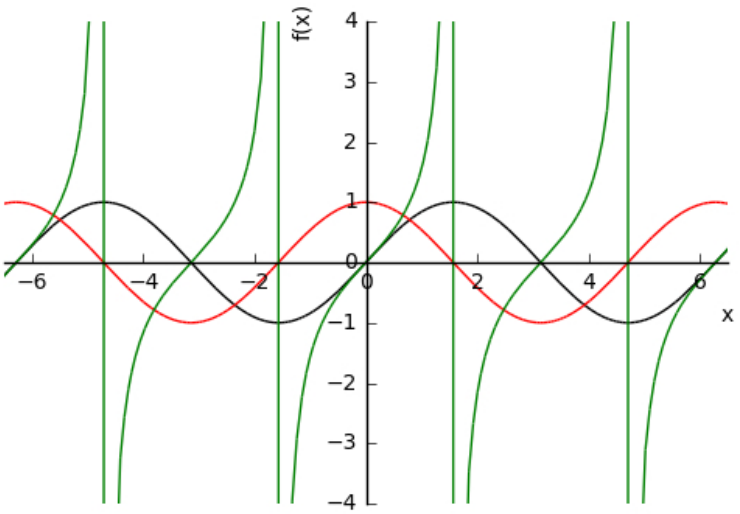
Out[6]: <sympy.plotting.plot.Plot at 0x198409dd780>

In [7]:
```
plot(sin(x), cos(x), tan(x), (x, -4, 4),ylim=(-4,4))
```



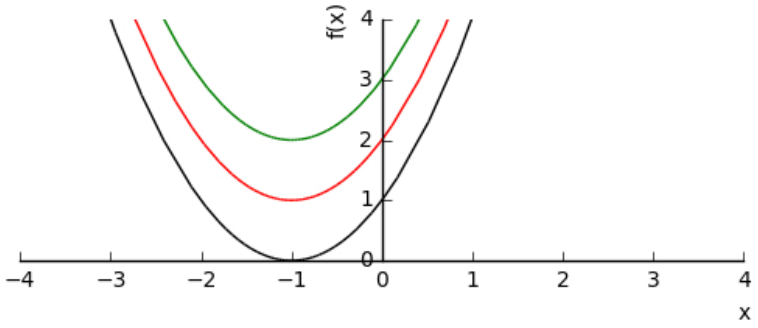
Out[7]: <sympy.plotting.plot.Plot at 0x1983f1c5a58>

In [23]:
```
p1 = sin(x)
p2 = cos(x)
p3 = tan(x)
leePlot = plot(p1,p2,p3,xlim=(-6.5,6.5),ylim=(-4,4), show=false)
leePlot[1].line_color = 'r'
leePlot[2].line_color = 'g'
leePlot.show()
```

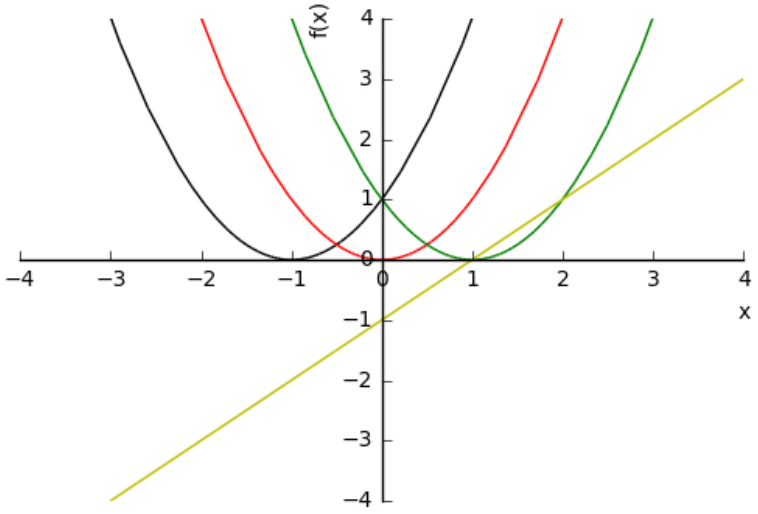


In [24]:
```
p1=x**2+2*x+1
p2=x**2+2*x+2
p3=x**2+2*x+3
#leePlot2 = plot(p1, xlim=(-4,4),ylim=(-4,4))
leePlot2 = plot(p1,p2,p3, xlim=(-4,4),ylim=(-4,4),show=false)
leePlot2[1].line_color='r'
```

```
leePlot2[2].line_color='g'
leePlot2.grid='True'
leePlot2.show()
```



In [22]:
```
p1 = (x+1)**2
p2 = (x)**2
p3 = (x-1)**2
p4 = (x-1)
leePlot3 = plot(p1, p2, p3, p4, xlim=(-4,4),ylim=(-4,4), show=false)
leePlot3[1].line_color='r'
leePlot3[2].line_color='g'
leePlot3[3].line_color='y'
leePlot3.show()
```



In [10]:
```
solve(x**2+2*x+1)
```

Out[10]: $[-1]$

In [11]:
```
solve(x**2+2*x+2)
```

Out[11]: $[-1-i,\quad -1+i]$

In [12]:
```
solve(x**2+2*x+3)
```

Out[12]: $\left[-1-\sqrt{2}i,\quad -1+\sqrt{2}i\right]$

In [13]:
```
import matplotlib.pyplot as plt
print(plt.style.available)
```

```
['bmh', 'seaborn-poster', 'seaborn-talk', 'seaborn-paper', 'seaborn-dark', 'fivethirtyeight', 'seaborn-t
icks', 'seaborn-notebook', 'seaborn-pastel', 'classic', 'ggplot', 'seaborn-muted', 'seaborn-bright', 'gr
ayscale', 'seaborn-white', 'seaborn-colorblind', 'seaborn-darkgrid', 'seaborn-whitegrid', 'seaborn-dark-
palette', 'dark_background', 'seaborn-deep']
```