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In [1]: %matplotlib inline
import pylab as pl
#import matplotlib as mpl
#import matplotlib.pyplot as pp

#pl.xkcd()
fig = pl.figure()
ax = fig.add_subplot(111)

red = pl.empty((2))
blue = pl.empty((2))

b_A = .3*150 + .2*200 + .5*200
b_B = .3*200 + .2*180 + .5*100

#(.3*1+.2*4+.5*3) * red + (.3*2+.2*3+.5*2)*blue <= b_A
red[0] = 0
blue[0] = b_A/ (.3*2+.2*3+.5*2)
red[1] = b_A/ (.3*1+.2*4+.5*3)
blue[1] = 0
pl.plot(red, blue, '-o', c='g')

#2 * red +2 *blue <= b_B
red[0] = 0
blue[0] = b_B/2
red[1] = b_B/2
blue[1] = 0
pl.plot(red, blue, '- ', c='y')

pl.xlabel("Product Red")
pl.ylabel("Product Blue")

pl.plot(71.1538461538,0,'o',c='r', ms=5)
pl.annotate('optimal point', xy=(70,0), xytext=(20,15),
           arrowprops=dict(facecolor='red', shrink=.05),)
pl.show()

```

