In [1]:

```
import matplotlib.pyplot as plt
import numpy as np
```

In [2]:

```
x=np.array([6,8,12,14,18])
y=np.array([350,775,1150,1395,1675])

xy=x*y

xy_mean1=xy.mean()
print("x.y full mean:", xy_mean1)

x_mean=x.mean()
y_mean=y.mean()

print("x mean:",x_mean)
print("y mean:", y_mean)

xy_mean2=x_mean*y_mean

print("x mean * y mean :",xy_mean2)



x_meansqr=x_mean**2
print("x mean sqr:",x_meansqr)

x_sqr=x**2
x_sqrmean=x_sqr.mean()
print("x sqr mean:",x_sqrmean)
```

```
x.y full mean: 14356.0
x mean: 11.6
y mean: 1069.0
x mean * y mean : 12400.4
x mean sqr: 134.56
x sqr mean: 152.8
```

In [3]:

```
m=((xy_mean2-xy_mean1)/(x_meansqr-x_sqrmean))
print("m : ",m)
```

```
m :  107.21491228070172
```

In [4]:

```
c=(y_mean-(m*x_mean))
print(c)
```

```
-174.69298245614004
```

In [5]:

```
yy1=[]
```

```
for i in range(5):
    yy1.append(m*x[i]+c)
y_y=np.array(yy1)

plt.plot(x,y_y)
plt.scatter(x,y)
plt.show()
```