

```
In [34]: from IPython.display import Image
from scipy.interpolate import interp1d
import numpy as np
import matplotlib.pyplot as plt
from scipy import interpolate
```

```
In [52]: def getvals(x,y):
    f = interp1d(x, y)
    xnew = np.linspace(0, x[1], num=41, endpoint=True)
    plt.grid()
    plt.plot(x, y, 'o', xnew, f(xnew))
    M = (y[1] - y[0])/(x[1] - x[0])
    print("Gradient = " + str(M))
```

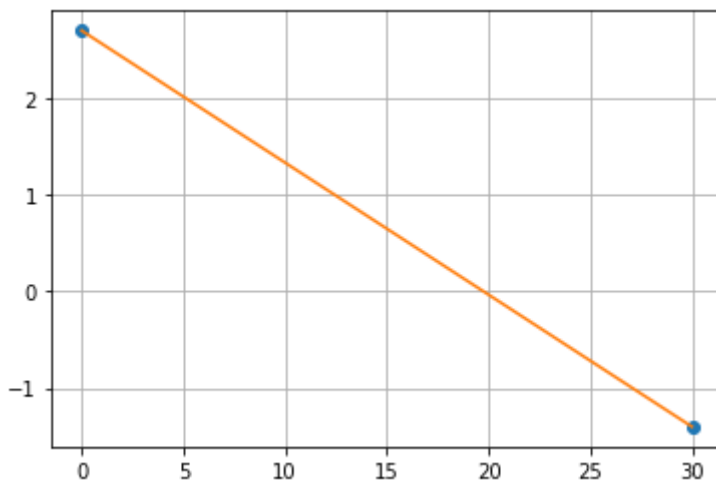
## Graph 1 - Camber vs Rack displacement

 Graph1

```
In [53]: x = [0.0,30.0]
y = [2.7, -1.4]
```

```
In [54]: getvals(x,y)
```

Gradient = -0.13666666666666666



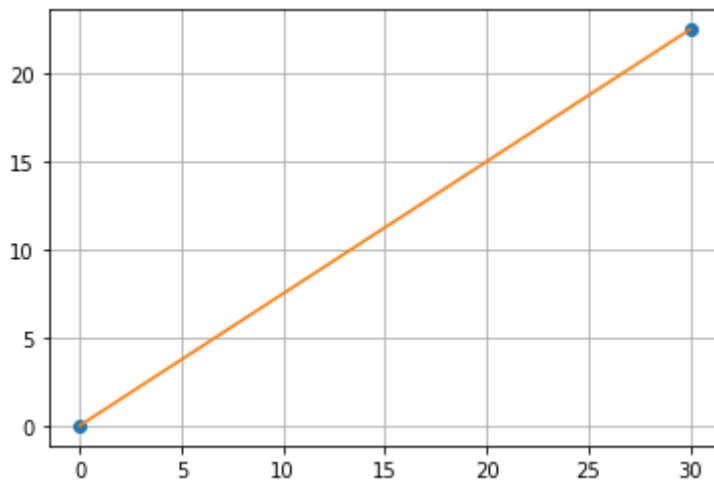
## Graph 2 - Tie Rod vs Rack displacement

 Graph2

```
In [55]: x = [0.0,30.0]
y = [0,22.5]
```

```
In [56]: getvals(x,y)
```

Gradient = 0.75



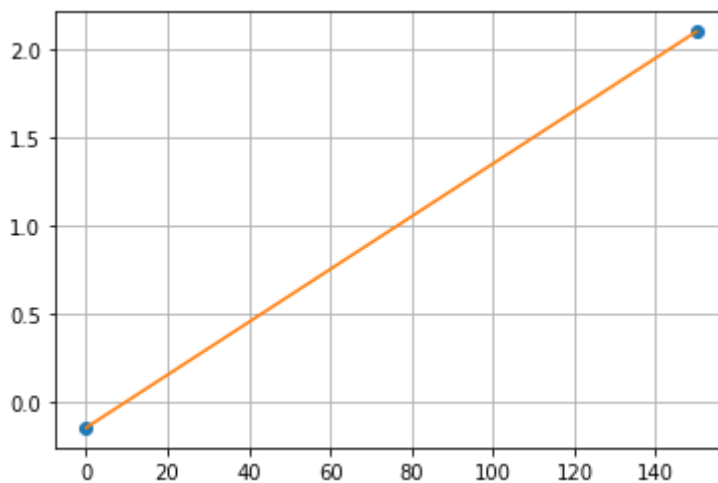
### Graph 3 - Toe Angle vs Wheel Center Vertical Travel

Graph2

```
In [57]: x = [0.0,150.0]  
y = [-0.15,2.1]
```

```
In [58]: getvals(x,y)
```

Gradient = 0.015



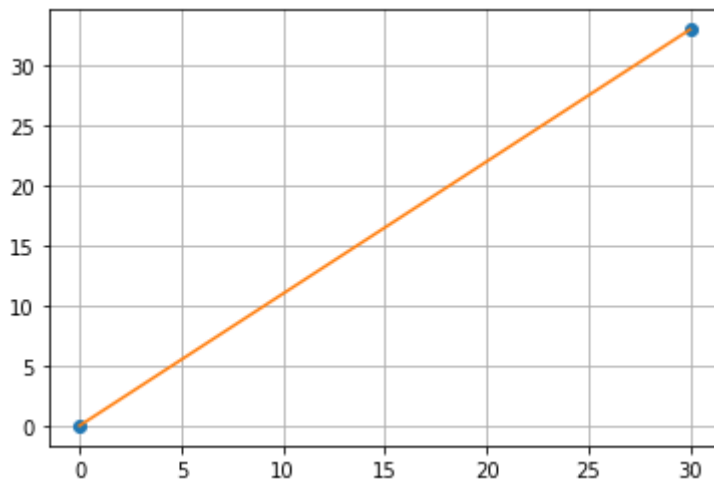
### Graph 4 - base travel vs rd

Graph4

```
In [59]: x = [0, 30]  
y = [0,33]
```

```
In [60]: getvals(x,y)
```

Gradient = 1.1



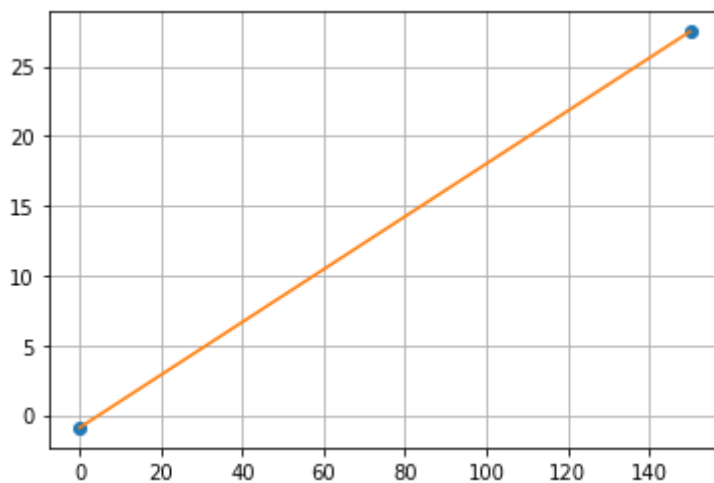
## Graph 5 - base travel vs wheel travel

 Graph4

```
In [61]: x = [0, 150]
         y = [-0.90, 27.5]
```

```
In [62]: getvals(x,y)
```

Gradient = 0.18933333333333333



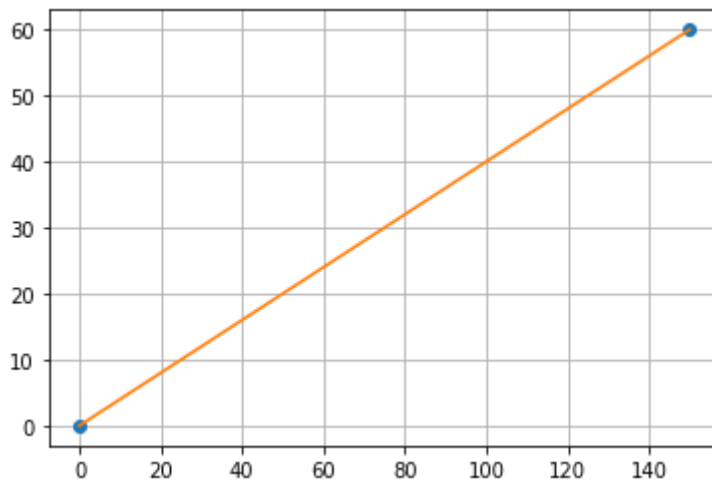
## Graph 6 - base travel vs wheel travel

 Graph4

```
In [63]: x = [0, 150]
         y = [0, 60]
```

```
In [64]: getvals(x,y)
```

Gradient = 0.4



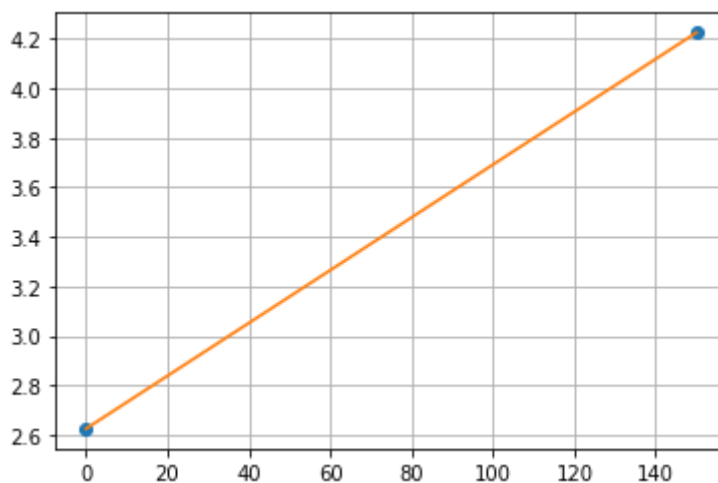
Graph 7 - camber vs wheel travel (+ve camber here is universal -ve camber )

 Graph4

In [65]:  
`x = [0, 150]`  
`y = [2.625, 4.225]`

In [66]:  
`getvals(x,y)`

Gradient = 0.010666666666666665



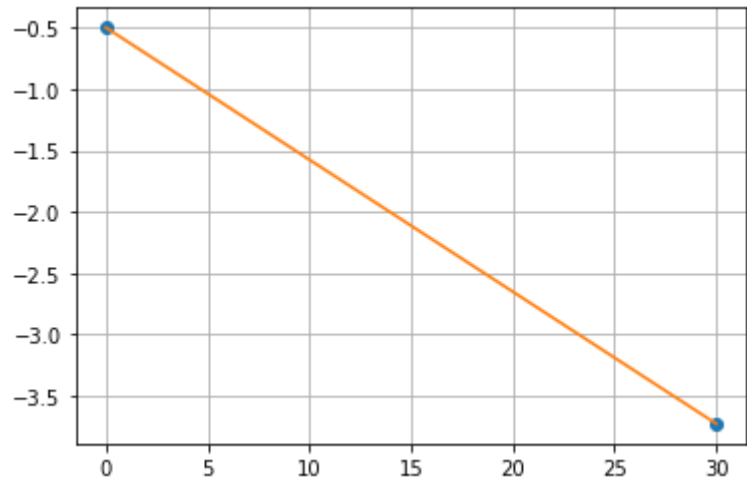
Graph 8 - track travel vs rd

 Graph4

In [67]:  
`x = [0, 30]`  
`y = [-0.5, -3.725]`

In [68]:  
`getvals(x,y)`

Gradient = -0.1075



In [ ]:

In [ ]: