```
[1] # numpy.linspace() function :  used to create an array of evenly spaced numbers within a specified range.
    #The range is defined by the start and end points of the sequence,
    #and the number of evenly spaced points to be generated between them.
    #Syntax :  numpy.linspace(start, stop, num=50, endpoint=True, retstep=False, dtype=None)

    import numpy as np
    np.linspace(3,4,7)  # stop is inclusive
```

```
array([3.        , 3.16666667, 3.33333333, 3.5       , 3.66666667,
       3.83333333, 4.        ])
```

```
[2] np.linspace(3,4,7,endpoint=False) # stop is exclusive
```

```
array([3.        , 3.14285714, 3.28571429, 3.42857143, 3.57142857,
       3.71428571, 3.85714286])
```

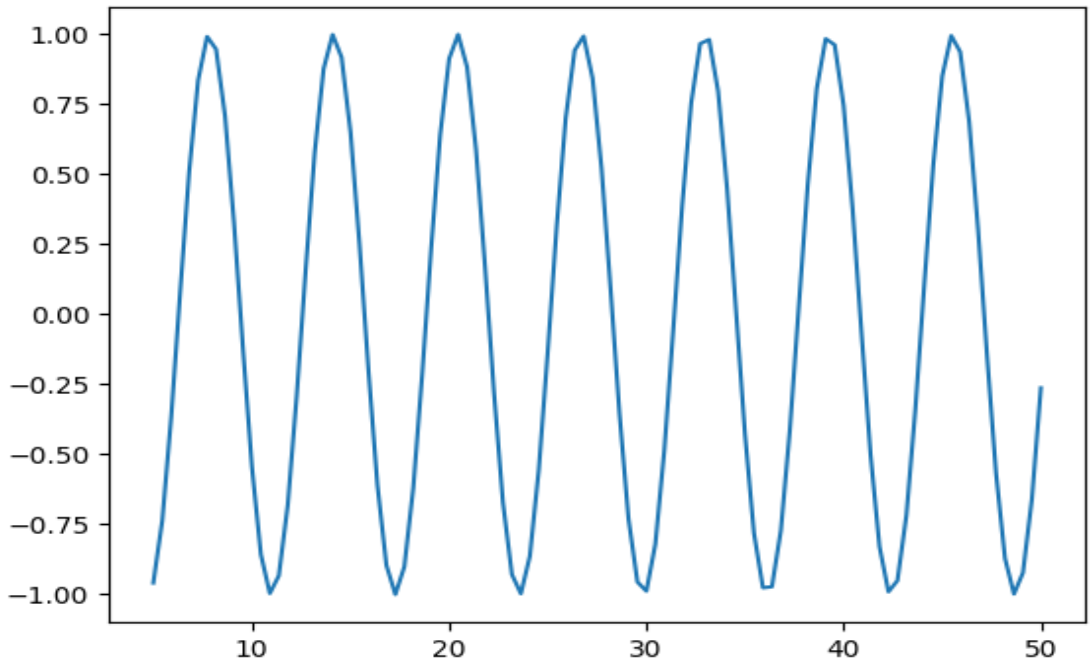
```
[3] np.linspace(3,4,7,endpoint=True, retstep=True)  # retstep gives the difference between two values
```

```
(array([3.        , 3.16666667, 3.33333333, 3.5       , 3.66666667,
        3.83333333, 4.        ]),
 0.16666666666666666)
```

```
[4] #Generating sin wave using linspace
    x = np.linspace(5,50,100)
    y = np.sin(x)
```

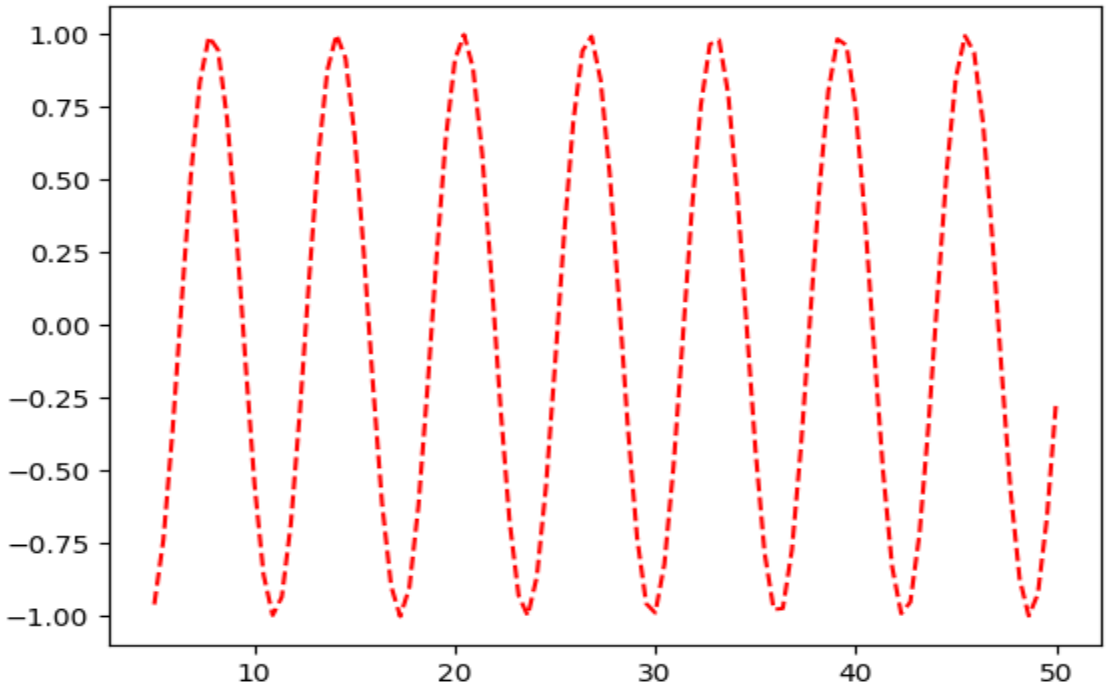
```
import matplotlib.pyplot as plt
plt.plot(x, y)
```

```
[<matplotlib.lines.Line2D at 0x7fcbd12b3190>]
```



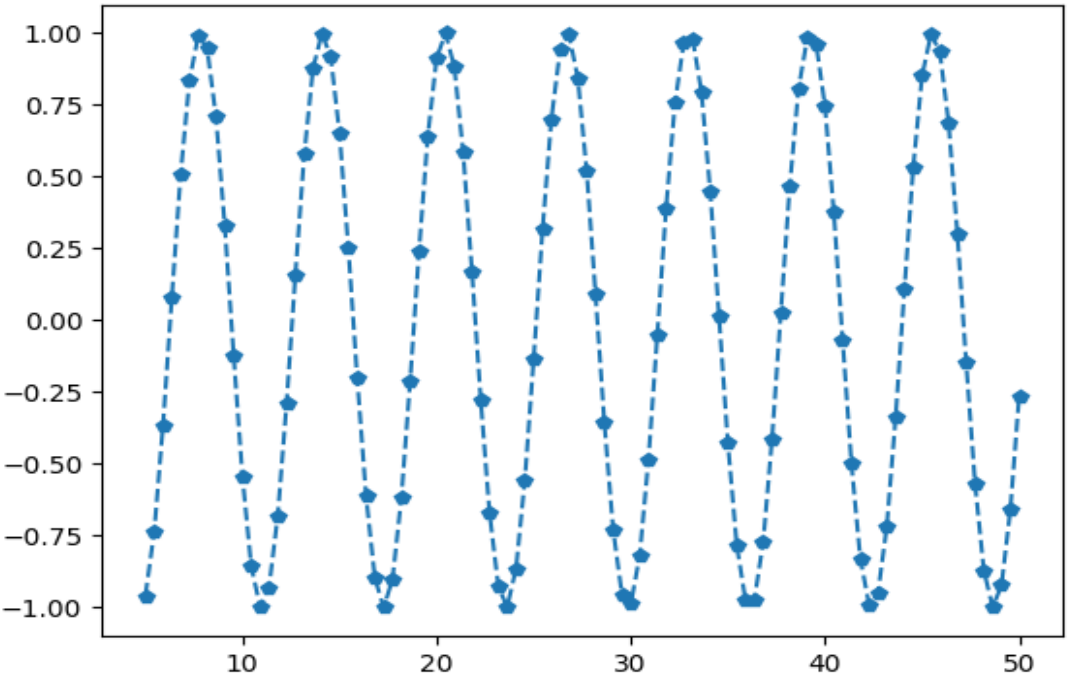
```
[8]  import matplotlib.pyplot as plt
     plt.plot(x, y, '--r')
```

```
[<matplotlib.lines.Line2D at 0x7fcbd093d420>]
```



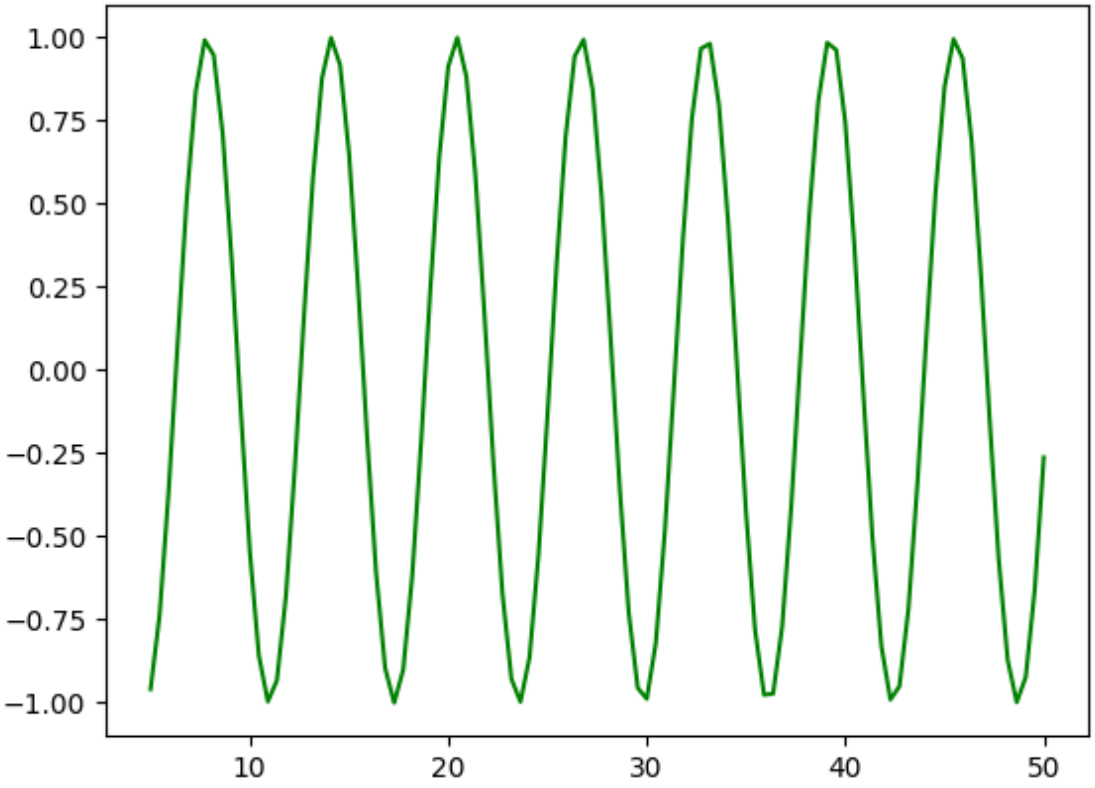

```
import matplotlib.pyplot as plt
plt.plot(x, y, '--p')
```

```
[<matplotlib.lines.Line2D at 0x7fcbd09a7f10>]
```



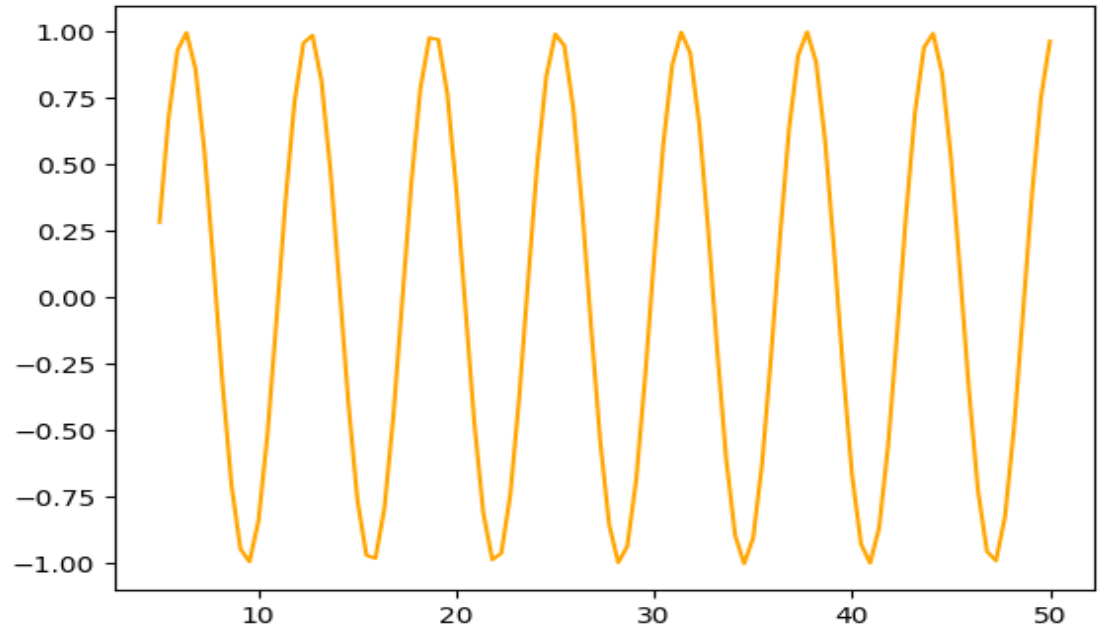
```
import matplotlib.pyplot as plt
plt.plot(x, y, color ='Green')
```

```
[<matplotlib.lines.Line2D at 0x7fcbd0428250>]
```




```
[17] #Generating cos wave using linspace
     import matplotlib.pyplot as plt
     y=np.cos(x)
     plt.plot(x, y, color ='orange')
```

```
[<matplotlib.lines.Line2D at 0x7fcbd04d25f0>]
```



```
[21] #plotting both the sine= and cos wave
     y1=np.sin(x)
     y2=np.cos(x)
     plt.plot(x, y1, color ='blue')
     plt.plot(x, y2, color ='green')
```

```
[<matplotlib.lines.Line2D at 0x7fcbd021da50>]
```