1)

```
import numpy as np

w1=np.array([120,500,230,75,45])
w2=np.array([130, 520, 210, 80, 40])
w3=np.array([125, 530, 220, 70, 50])
w4=np.array([140,540,200,90,60])
print("working")

def calculate_total(w1, w2, w3, w4):
    tot_electronics=tot_groceries=tot_clothing=tot_furniture=tot_stationary=0
    tot_electronics=w1[0]+w2[0]+w3[0]+w4[0]
    tot_groceries=w1[1]+w2[1]+w3[1]+w4[1]
    tot_clothing=w1[2]+w2[2]+w3[2]+w4[2]
    tot_furniture=w1[3]+w2[3]+w3[3]+w4[3]
    tot_stationary=w1[4]+w2[4]+w3[4]+w4[4]

    return tot_electronics, tot_groceries, tot_clothing, tot_furniture, tot_stationary
```

2)

```
week1 = week2 = week3 = week4 =0
for i in range(5):
    week1+=w1[i]
    week2+=w2[i]
    week3+=w3[i]
    week4+=w4[i]
print("Total sales in week1: ",week1)
print("Total sales in week2: ",week2)
print("Total sales in week3: ",week3)
print("Total sales in week4: ",week4)

tot_electronics, tot_groceries, tot_clothing, tot_furniture, tot_stationary= calculate_total(w1, w2,
w3, w4)
tot_electronics=tot_electronics/4
tot_groceries=tot_groceries/4
tot_clothing=tot_clothing/4
tot_furniture=tot_furniture/4
tot_stationary=tot_stationary/4

print("Avg sales of electronics= ",tot_electronics)
print("Avg sales of groceries= ",tot_groceries)
print("Avg sales of clothing= ",tot_clothing)
print("Avg sales of furniture= ",tot_furniture)
print("Avg sales of stationary= ",tot_stationary)
```

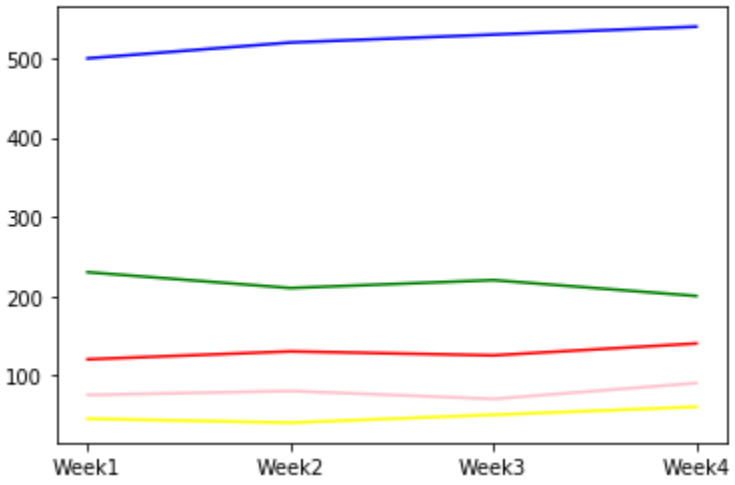
```
Total sales in week1:  970
Total sales in week2:  980
Total sales in week3:  995
Total sales in week4:  1030
Avg sales of electronics=  128.75
Avg sales of groceries=  522.5
Avg sales of clothing=  215.0
Avg sales of furniture=  78.75
Avg sales of stationary=  48.75
```

3)

```
import matplotlib.pyplot as plt
electronics=[]
electronics.append(w1[0])
electronics.append(w2[0])
electronics.append(w3[0])
electronics.append(w4[0])
print(electronics)

groceries=[]
groceries.append(w1[1])
groceries.append(w2[1])
groceries.append(w3[1])
groceries.append(w4[1])

clothing=[]
clothing.append(w1[2])
clothing.append(w2[2])
clothing.append(w3[2])
clothing.append(w4[2])

furniture=[]
furniture.append(w1[3])
furniture.append(w2[3])
furniture.append(w3[3])
furniture.append(w4[3])

stationary=[]
stationary.append(w1[4])
stationary.append(w2[4])
stationary.append(w3[4])
stationary.append(w4[4])

weeks=['Week1', 'Week2', 'Week3', 'Week4']
```

```
plt.plot(weeks, electronics, color='red')
plt.plot(weeks, groceries, color='blue')
plt.plot(weeks, clothing, color='green')
plt.plot(weeks, furniture, color='pink')
plt.plot(weeks, stationary, color='yellow')
plt.show()
```

```
[120, 130, 125, 140]
```



4)

```
def worst_best(w1, w2, w3, w4):
    tot_electronics, tot_groceries, tot_clothing, tot_furniture, tot_stationary=calculate_total(w1, w2, w3, w4)
    totals={}
    totals["electronics"]=tot_electronics
    totals["groceries"]=tot_groceries
    totals["clothing"]=tot_clothing
    totals["furniture"]=tot_furniture
    totals["stationary"]=tot_stationary
    maxx=0
    max_item=""
    minn=10000
    min_item=""
    for item in totals:
        if totals[item]>maxx:
            maxx=totals[item]
            max_item=item
        if totals[item]<minn:
            minn=totals[item]
            min_item=item
    print("Best selling item is: ", max_item)
    print("Worst selling item is: ", min_item)
```

worst_best(w1,w2,w3,w4)
categories=["Electronics", "Groceries", "Clothing", "Furniture", "Stationary"]
total_items=[tot_electronics, tot_groceries, tot_clothing, tot_furniture, tot_stationary]
plt.bar(categories, total_items, color='pink')

```
Best selling item is:  groceries
Worst selling item is:  stationary

<BarContainer object of 5 artists>
```