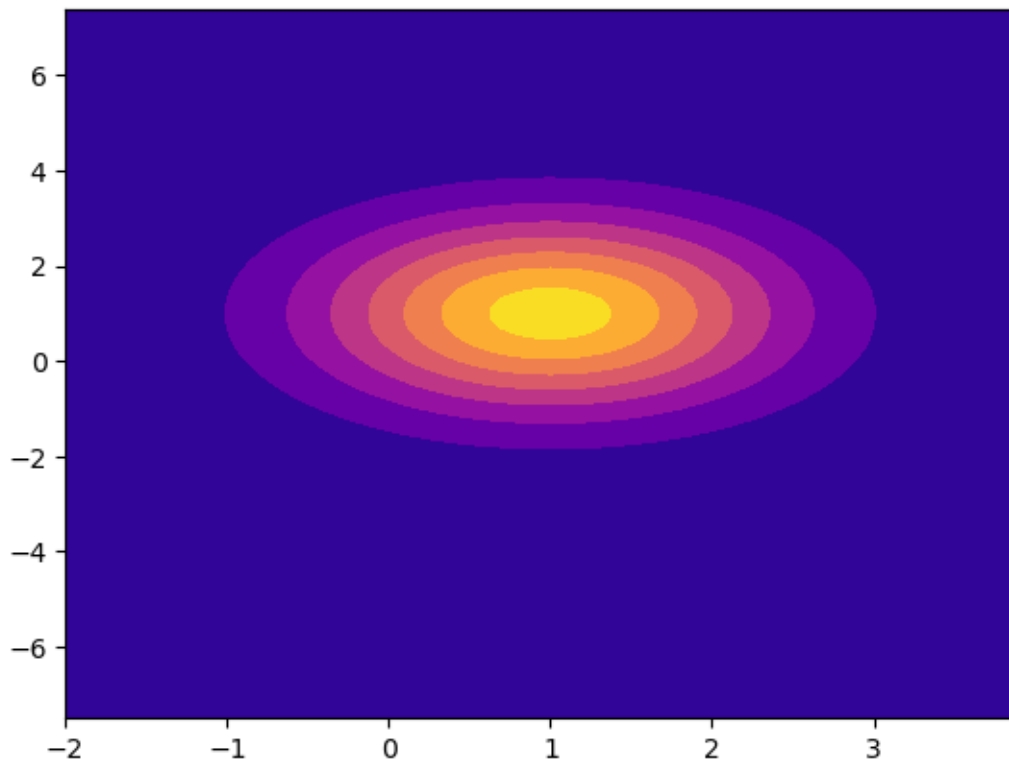


Question 6 parts b,c

September 2, 2023

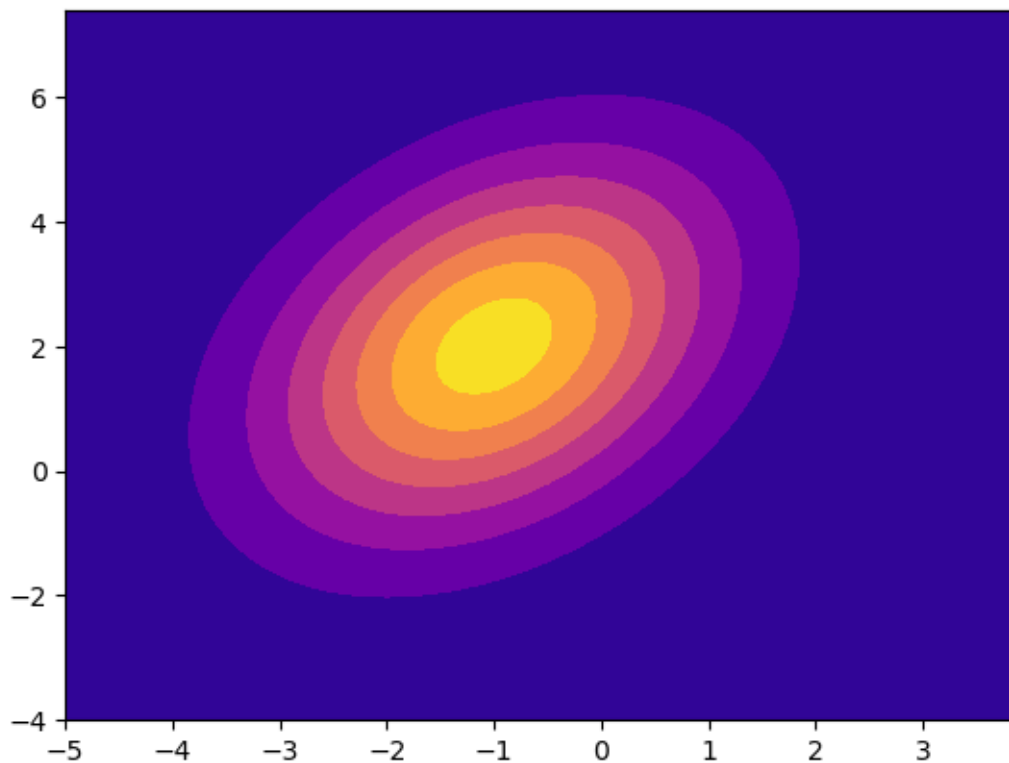
```
[21]: import numpy as np
import matplotlib.pyplot as plt
from scipy.stats import multivariate_normal

x, y = np.mgrid[-2.0:4.0:.1, -7.5:7.5:.1]
rv = multivariate_normal([1, 1], [[1, 0], [0, 2]])
d_t = np.distutils(x, y)
z = rv.pdf(d_t)
plt.contourf(x, y, z, cmap='plasma', levels=8)
plt.show()
```



```
[22]: import numpy as np
import matplotlib.pyplot as plt
from scipy.stats import multivariate_normal

x, y = np.mgrid[-5.0:4.0:.1, -4:7.5:.1]
rv = multivariate_normal([-1, 2], [[2, 1], [1, 4]])
d_t = np.sqrt((x + 1)**2 + (y - 2)**2)
z = rv.pdf(d_t)
plt.contourf(x, y, z, cmap=plt.cm.plasma, levels=8)
plt.show()
```



```
[ ]:
```