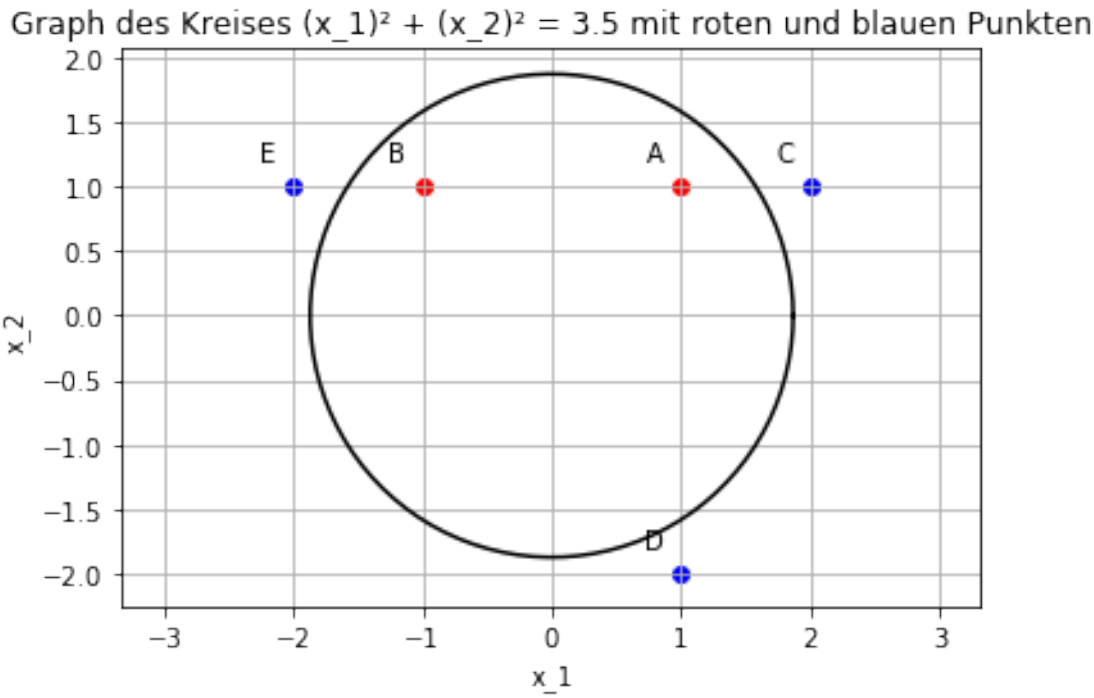
Kernel-Trick-Beispiel

August 15, 2023

[13]:
```
import numpy as np
import matplotlib.pyplot as plt

theta = np.linspace(0, 2*np.pi, 100)
r = 1.871

x = r * np.cos(theta)
y = r * np.sin(theta)

plt.plot(x, y, color='black', label='(x_1)² + (x_2)² = 3.5')

points = {'A': (1, 1), 'B': (-1, 1), 'C': (2, 1), 'D': (1, -2), 'E': (-2, 1)}
colors = {'A': 'red', 'B': 'red', 'C': 'blue', 'D': 'blue', 'E': 'blue'}

for point, coords in points.items():
    plt.scatter(coords[0], coords[1], color=colors[point], label=point)
    plt.annotate(point, coords, textcoords="offset points", xytext=(-10,10),␣
 ↪ha='center')

plt.xlabel('x_1')
plt.ylabel('x_2')
plt.title('Graph des Kreises (x_1)² + (x_2)² = 3.5 mit roten und blauen␣
 ↪Punkten')
plt.grid(True)
plt.axis('equal')
#plt.legend()
plt.show()
```


Graph des Kreises (x_1)² + (x_2)² = 3.5 mit roten und blauen Punkten
E
B
A
C
D
x_1
x_2

[ ]: