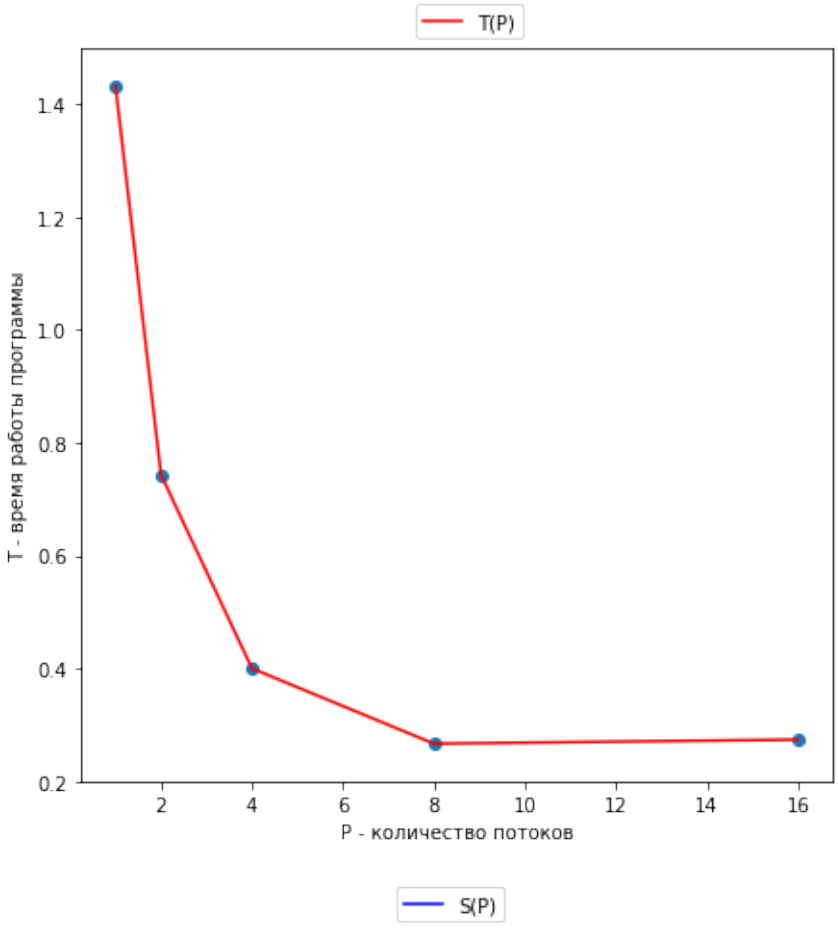
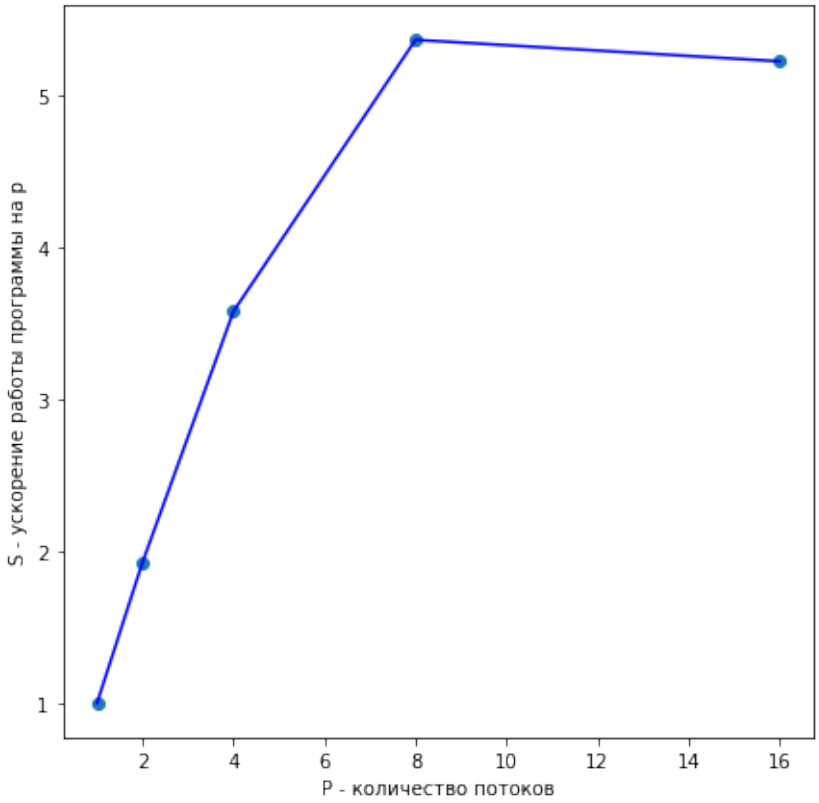
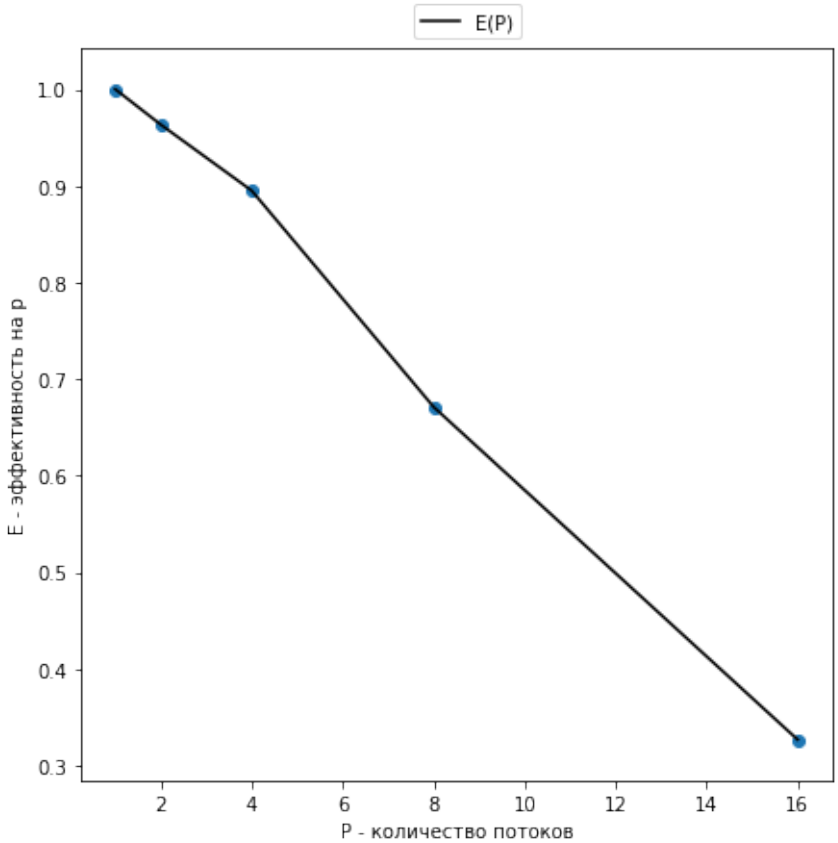
In [10]:
```
import matplotlib.pyplot as plt
#%matplotlib inline
# Возьмем N = 100000
T_arr = [1.431612,0.743030,0.399903,0.266708,0.273936]
P_arr = [1,2,4,8,16]
plt.figure(figsize=(7, 7))
plt.xlabel('P - количество потоков')
plt.ylabel('T - время работы программы')
plt.scatter(P_arr, T_arr)
plt.plot(P_arr, T_arr, 'r', label='T(P)')
plt.legend(bbox_to_anchor=(0.6, 1), loc=4)
plt.show()
S_arr = [T_arr[0]/T_arr[i] for i in range(len(T_arr))]
plt.figure(figsize=(7, 7))
plt.xlabel('P - количество потоков')
plt.ylabel('S - ускорение работы программы на p')
plt.scatter(P_arr, S_arr)
plt.plot(P_arr, S_arr, 'b', label='S(P)')
plt.legend(bbox_to_anchor=(0.6, 1), loc=4)
plt.show()
E_arr = [S_arr[i]/P_arr[i] for i in range(len(T_arr))]
plt.figure(figsize=(7, 7))
plt.xlabel('P - количество потоков')
plt.ylabel('E - эффективность на p')
plt.scatter(P_arr, E_arr)
plt.plot(P_arr, E_arr, 'black', label='E(P)')
plt.legend(bbox_to_anchor=(0.6, 1), loc=4)
plt.show()
```

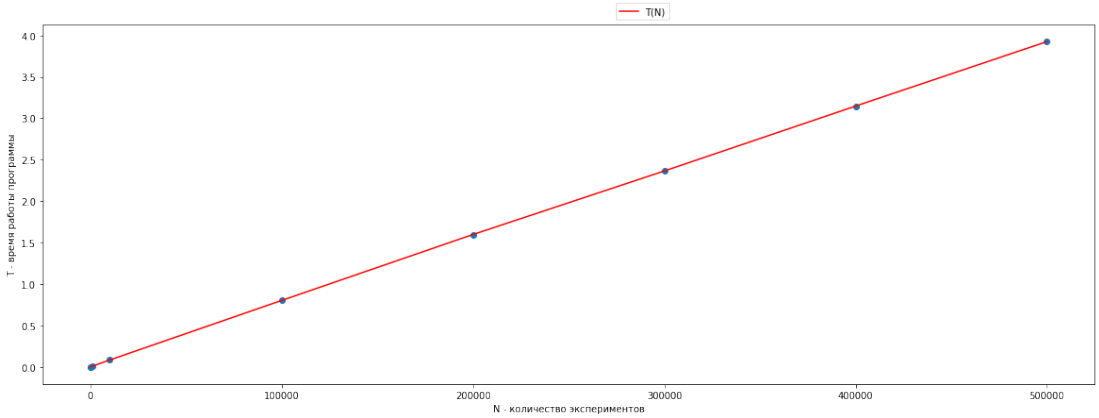


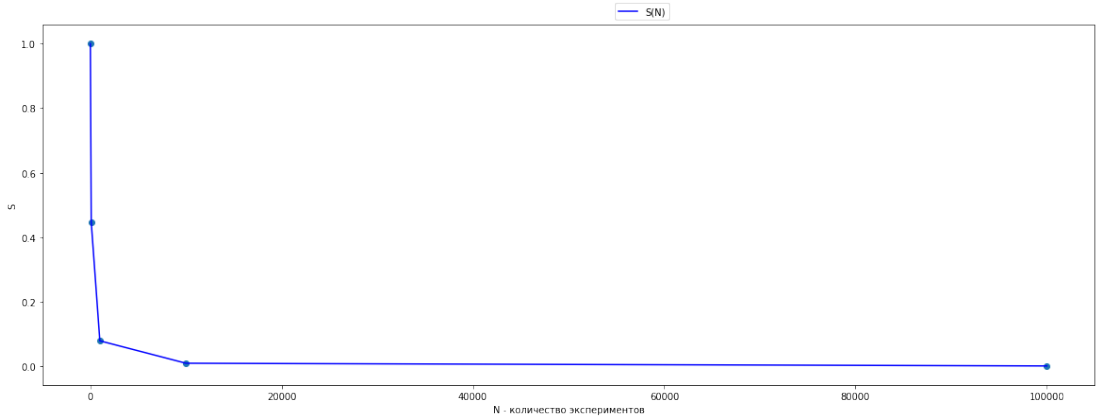


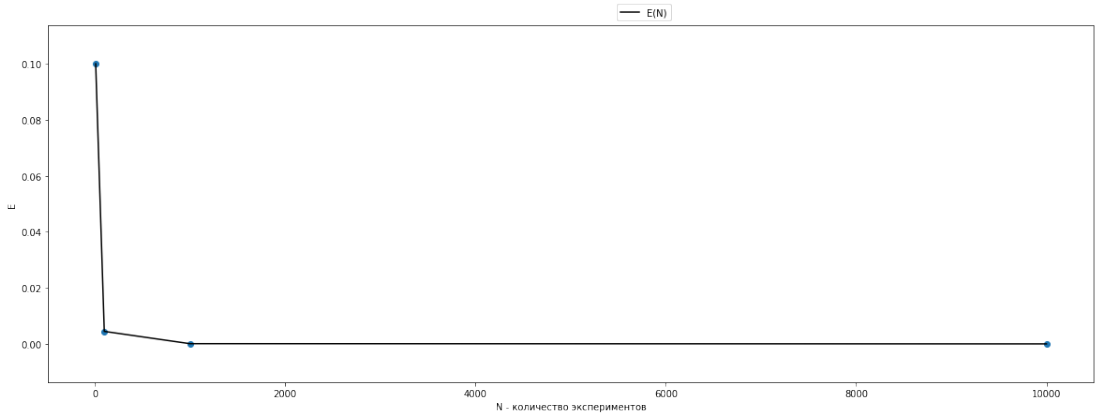


In [11]:
```
# Возьмем P = 4
T_arr = [0.000787,0.001762,0.009987,0.084154,0.803332,1.598451,2.36436
N_arr = [10,100,1000,10000,100000,200000,300000,400000,500000]
plt.figure(figsize=(20, 7))
plt.xlabel('N - количество экспериментов')
plt.ylabel('T - время работы программы')
plt.scatter(N_arr, T_arr)
```

```
plt.plot(N_arr, T_arr, 'r', label='T(N)')
plt.legend(bbox_to_anchor=(0.6, 1), loc=4)
plt.show()
S_arr = [T_arr[0]/T_arr[i] for i in range (len(T_arr) - 4)]
plt.figure(figsize=(20, 7))
plt.xlabel('N - количество экспериментов')
plt.ylabel('S')
plt.scatter(N_arr[:-4], S_arr)
plt.plot(N_arr[:-4], S_arr, 'b', label='S(N)')
plt.legend(bbox_to_anchor=(0.6, 1), loc=4)
plt.show()
E_arr = [S_arr[i]/N_arr[i] for i in range (len(N_arr[:-5]))]
plt.figure(figsize=(20, 7))
plt.xlabel('N - количество экспериментов')
plt.ylabel('E')
plt.scatter(N_arr[:-5], E_arr)
plt.plot(N_arr[:-5], E_arr, 'black', label='E(N)')
plt.legend(bbox_to_anchor=(0.6, 1), loc=4)
plt.show()
```







In [ ]:

In [ ]: