

```
import random
for _ in range(20):
    number_range = random.randint(20,300)
    print(number_range)
```

↩ 185  
227  
70  
234  
231  
66  
121  
159  
76  
272  
209  
75  
221  
275  
144  
44  
63  
223  
127  
122

```
import random
range_start = 20
range_end = 300
for i in range(20):
    sample_space = random.sample(range(20, 300), 5)
    print(f"Sample space {i + 1}: {sample_space}")
```

↩ Sample space 1: [235, 192, 46, 217, 25]  
Sample space 2: [167, 60, 220, 116, 244]  
Sample space 3: [177, 157, 250, 292, 271]  
Sample space 4: [243, 145, 205, 62, 160]  
Sample space 5: [172, 53, 209, 178, 218]  
Sample space 6: [113, 177, 144, 281, 294]  
Sample space 7: [132, 60, 34, 152, 252]  
Sample space 8: [62, 229, 47, 270, 50]  
Sample space 9: [108, 41, 268, 215, 213]  
Sample space 10: [193, 97, 151, 224, 265]  
Sample space 11: [248, 189, 211, 68, 89]  
Sample space 12: [97, 56, 282, 27, 294]  
Sample space 13: [105, 74, 130, 141, 22]  
Sample space 14: [186, 27, 65, 38, 97]  
Sample space 15: [105, 166, 90, 50, 271]  
Sample space 16: [133, 263, 271, 134, 279]  
Sample space 17: [56, 181, 104, 241, 185]  
Sample space 18: [28, 293, 287, 272, 157]  
Sample space 19: [187, 62, 138, 268, 98]  
Sample space 20: [256, 236, 254, 61, 245]

```
num_sample_spaces = 20
sample_size = 5
sample_spaces = [random.sample(range(20, 300), sample_size) for _ in range(num_sample_spaces)]
def calculate_mean(sample):
    return sum(sample) / len(sample)
def calculate_std_dev(sample):
    mean = calculate_mean(sample)
    variance = sum((x - mean) ** 2 for x in sample) / len(sample)
    return variance ** 0.5
means = [calculate_mean(sample) for sample in sample_spaces]
std_devs = [calculate_std_dev(sample) for sample in sample_spaces]
print(f"Means are: {means}")
print(f"Standard deviation is {std_devs}")
```

↩ Means are: [196.4, 182.8, 80.0, 175.0, 127.2, 196.6, 197.4, 202.8, 135.4, 163.4, 218.6, 125.4, 126.8, 164.6, 202.2, 120.2, 209  
Standard deviation is [64.14234170966944, 84.2648206548854, 57.68535342701819, 54.9508871629931, 65.91934465693663, 41.51915221

