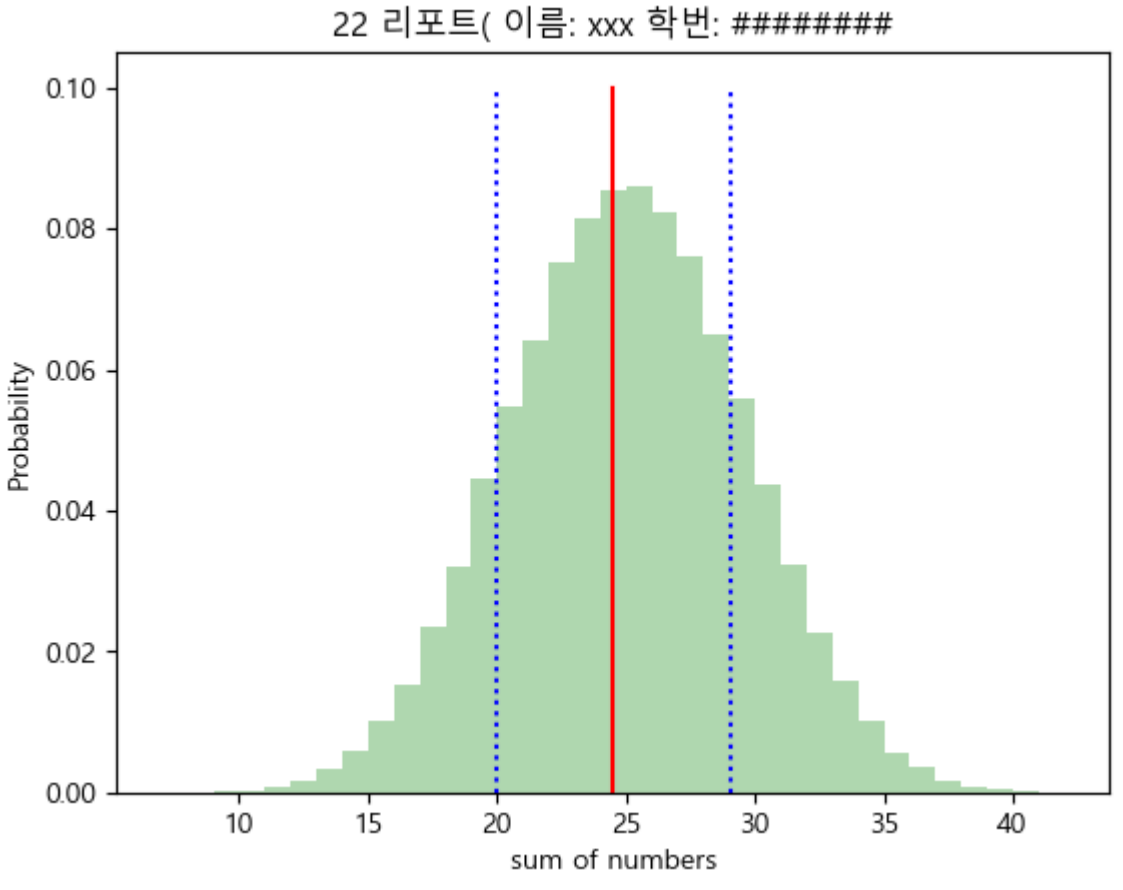
In [3]:
```python
import matplotlib.pyplot as plt
import numpy as np

# 한글 폰트 설정
plt.rcParams['font.family'] = 'Malgun Gothic'
plt.rcParams['axes.unicode_minus'] = False  # 마이너스 기호 깨짐 방지

dices = np.random.randint(1,7,7)
print(dices)
res = []
for _ in range(100000):
    dices = np.random.randint(1,7,7)
    res.append(dices.sum())
n, bins,_=plt.hist(res, bins=range(7,43),density=True,facecolor='g', alpha=0.3)
print(n)
print(bins)
m,sig=np.mean(res), np.std(res)
print(m,sig)
x=[m-sig,m,m+sig]
y=[0,0.1]
plt.plot([x[0],x[0]],y,'b:',[x[1],x[1]],y,'r-',[x[2],x[2]],y,'b:')
plt.title('22 리포트( 이름: xxx 학번: ########') # 본인의 정보
plt.xlabel('sum of numbers')
plt.ylabel('Probability')
plt.show()
```

```
[4 5 5 4 3 3 4]
[0.000e+00 0.000e+00 1.300e-04 3.400e-04 7.100e-04 1.640e-03 3.200e-03
 5.910e-03 1.016e-02 1.532e-02 2.356e-02 3.211e-02 4.439e-02 5.482e-02
 6.401e-02 7.518e-02 8.138e-02 8.539e-02 8.597e-02 8.219e-02 7.605e-02
 6.504e-02 5.596e-02 4.367e-02 3.225e-02 2.259e-02 1.577e-02 1.005e-02
 5.600e-03 3.630e-03 1.700e-03 7.800e-04 3.600e-04 9.000e-05 5.000e-05]
[ 7.  8.  9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24.
 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42.]
24.50875 4.51759044596785
```


22 리포트(이름: xxx 학번: ########
0.10
0.08
0.06
0.04
0.02
0.00
Probability
10
15
20
25
30
35
40
sum of numbers

In [ ]: