Anova Test

Program:

```
import numpy as np
from scipy.stats import f_oneway


group1 = [23, 25, 27, 22, 24]
group2 = [30, 32, 31, 29, 28]
group3 = [35, 36, 34, 33, 37]


f_stat, p_value = f_oneway(group1, group2, group3)


print(f"F-Statistic: {f_stat:.2f}")
print(f"P-Value: {p_value:.4f}")


alpha = 0.05  # Significance level
if p_value < alpha:
    print("Reject the null hypothesis: At least one group mean is significantly different.")
else:
    print("Fail to reject the null hypothesis: No significant difference between group means.")
```

Output:

```
F-Statistic: 50.37
P-Value: 0.0000
Reject the null hypothesis: At least one group mean is significantly different.
```