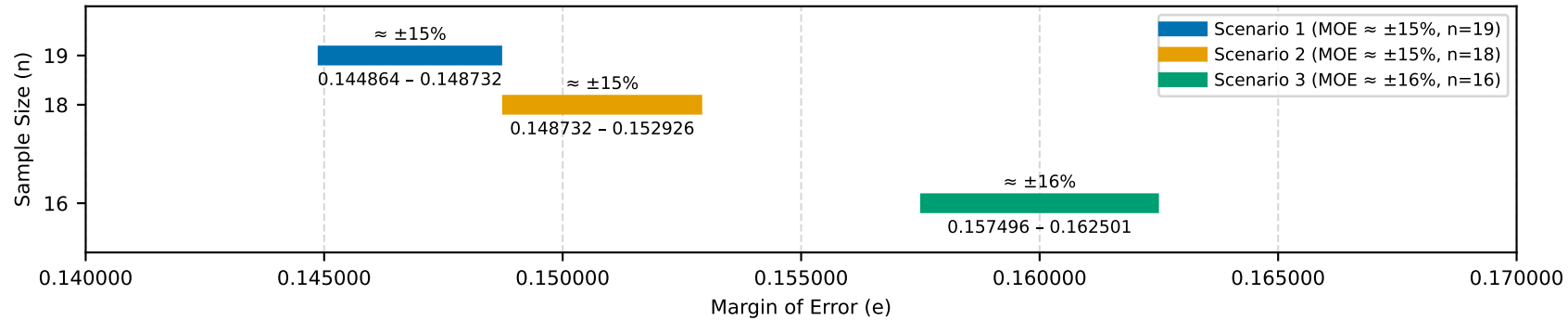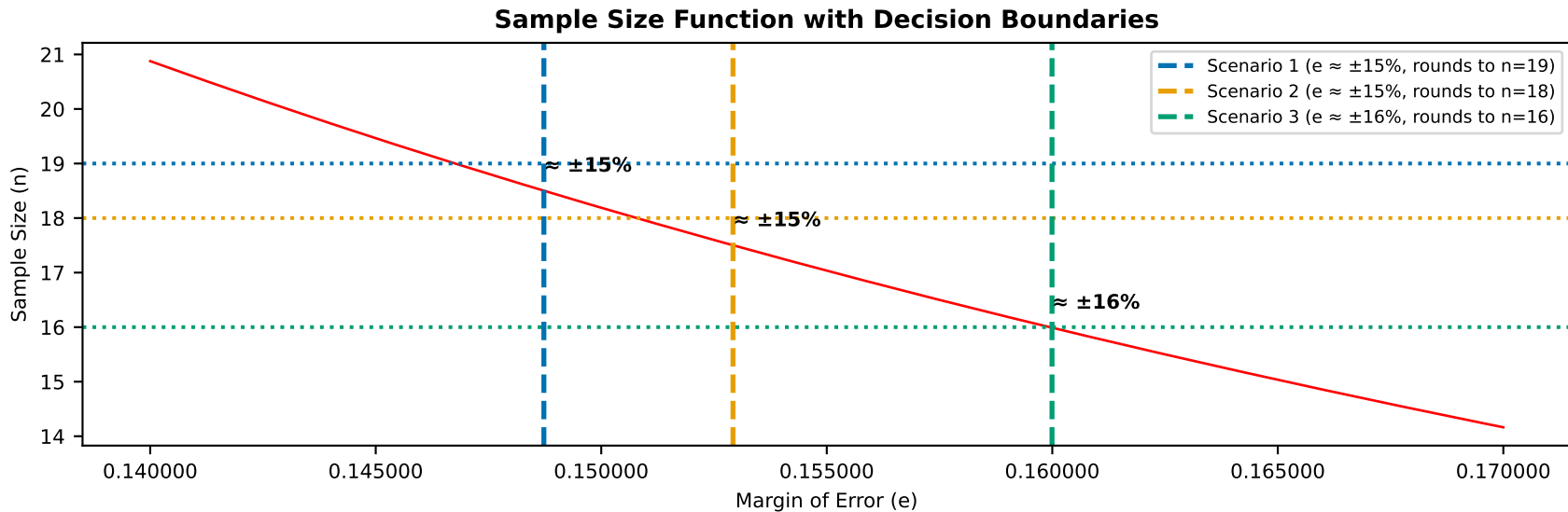# Margin of Error Thresholds for Sample Size

Cochran's sample size equation with finite population correction parameters :

- **Confidence Level (CL)**: 80%
- **Z-Score (z)**: 1.28 (corresponds to 80% CL)
- **Margin of Error (e)**: 0.148728 (±15%), 0.152921 (±15%), 0.159994 (±16%)
- **Population Proportion (p)**: 0.50 (maximum variability)
- **Population Size (N)**: 1 to 20,000

Sample Size Function with Decision Boundaries

Legend:
- Scenario 1 (e ≈ ±15%, rounds to n=19)
- Scenario 2 (e ≈ ±15%, rounds to n=18)
- Scenario 3 (e ≈ ±16%, rounds to n=16)

Cochran's sample size equation with finite population correction parameters :

- **Confidence Level (CL)**: 80%
- **Z-Score (z)**: 1.28 (corresponds to 80% CL)
- **Margin of Error (e)**: 0.148728 (±15%), 0.152921 (±15%), 0.159994 (±16%)
- **Population Proportion (p)**: 0.50 (maximum variability)
- **Population Size (N)**: 1 to 20,000