Practice worksheet | Sampling and confidence intervals

Sampling distribution of a sample proportion

Name: _____ Date: _____

6 questions | 12 marks

1. For $p = 0.3$, $n = 400$, find sample-proportion mean and variance. [2 marks]

2. For $p = 0.25$, $n = 300$, find sample-proportion SD. [2 marks]

3. Check normal expected-count conditions for $p = 0.02$, $n = 100$. [2 marks]

4. For $p = 0.5, n = 100$, approximate $P(0.4 < \hat{p} < 0.6)$ without continuity correction. [2 marks]

5. Why cannot a sample of 20 have sample proportion exactly 0.333? [2 marks]

6. Compare sample-proportion SDs for $n = 150$ and $n = 600$ with p fixed. [2 marks]