

Q1

1 Point

Which of these is a condition for approximating the sampling distribution of the sample proportion using a normal distribution?

- ☐ The sample is taken without replacement from less than 10% of the population
- ☒ np and $n(1-p)$ are both greater than 10
- ☐ np and $n(1-p)$ are both less than 5
- ☐ The sample size n is greater than 100, regardless of p

Q2

1 Point

The pooled sample proportion is used in hypothesis testing when:

- ☐ The two samples are dependent on each other
- ☐ The null hypothesis states that the two proportions are different
- ☐ Each sample comes from a different population
- ☒ The null hypothesis assumes the two proportions are equal

Q3

1 Point

How do you calculate the pooled sample proportion?

- ☐ $\hat{p}_{\text{pooled}} = \frac{\text{Total in Sample 1}}{\text{Total in Sample 2}}$
- ☐ $\hat{p}_{\text{pooled}} = \frac{\text{Successes in Sample 1}}{\text{Successes in Sample 2}}$
- ☐ $\hat{p}_{\text{pooled}} = \frac{\text{Successes in Sample 1}}{\text{Total in Sample 1}}$
- ☒ $\hat{p}_{\text{pooled}} = \frac{\text{Successes in Sample 1} + \text{Successes in Sample 2}}{\text{Total in Sample 1} + \text{Total in Sample 2}}$

Q4**1 Point**

Which of the following would lead to a larger standard error for the difference between two sample proportions?

- ☐ Larger sample sizes for both samples
- ☒ Smaller sample sizes for both samples
- ☐ Larger sample proportions for both samples
- ☐ Smaller standard deviations within the samples

Q5**1 Point**

The decision to reject the null hypothesis when the p-value is less than the significance level is an attempt to control:

- ☐ The effect size
- ☐ The power of the test
- ☒ Type I errors
- ☐ Type II errors