

# B-Q01 One Categorical Variable

Due Feb 9 at 11:59pm

Points 8

Questions 4

Available after Feb 7 at 2pm

Time Limit None

Allowed Attempts Unlimited

Take the Quiz Again

## Attempt History

	Attempt	Time	Score
LATEST	<a href="#">Attempt 1</a>	10 minutes	5 out of 8

Score for this attempt: 5 out of 8

Submitted Feb 7 at 2:26pm

This attempt took 10 minutes.

Question 1

2 / 2 pts

UK Residents Survey:

The following table summaries a survey of some UK residents about their smoking behavior:

UK Resident Smoking Survey

	smoke	Freq
1	No	1158
2	Yes	$X$
Total		1521

A. Find the value of  $X$ , the count of residents who smoke.  $X=$

363

.

B. Find the proportion of residents who do not smoke:  $\hat{p}_{No}=$

.761

.(Use a decimal number rounded to 3 decimal

places).

**Answer 1:**

Correct!

363

**Answer 2:**

Correct!

.761

Correct Answer

0.761

Correct Answer

76.1%

Great job.

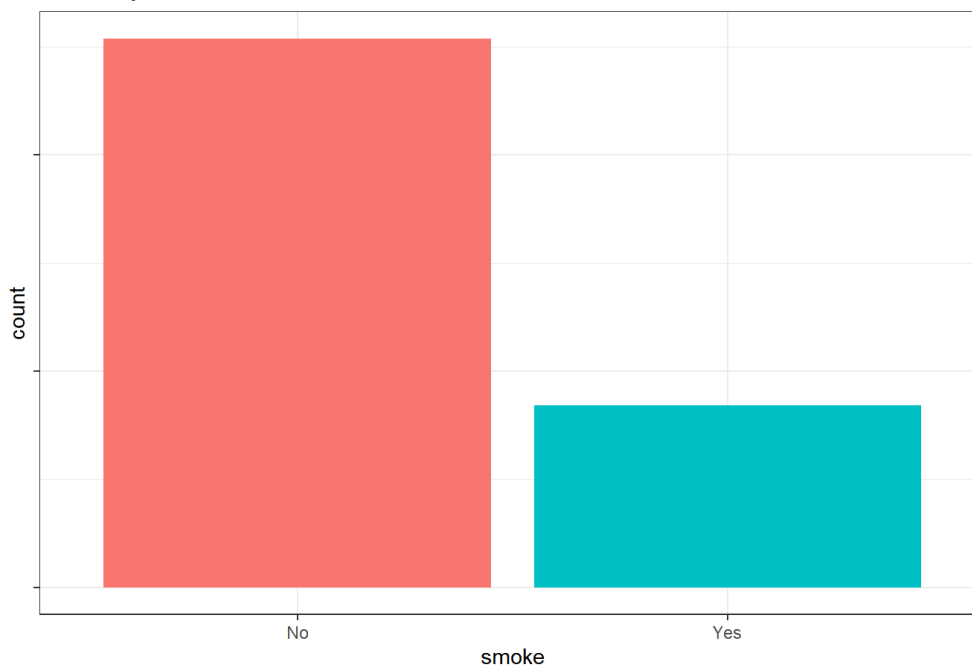
## Question 2

0 / 2 pts

UK Residents Survey:

The following graph shows the relative number of smokers versus non-smokers in a survey of some UK residents:

A Survey of UK's Residents



Select all plausible conclusions if the graph represents the responses of four (4) UK residents

Correct!

You Answered

☒ The sampled UK residents have more non-smokers than smokers.

☒ UK residents most likely have more non-smokers than smokers.

☐

The sampled UK residents could have equal non-smokers and smokers; the difference could be due to chance.

Correct Answer

☐

UK residents could have equal non-smokers and smokers; the difference could be due to chance.

Note that

- A sample is subject to sampling error, and the smaller the sample is, the larger the error could be.
- When deciding on the reasons for a difference, consider the effect of changing one or two responses on the result.
- When making a decision, we should only use the data, not our assumptions or belief.

### Question 3

1 / 2 pts

UK Residents Survey:

The following table summarizes a survey of some UK residents about their marital status:

UK Resident Smoking Survey

	marital_status	Freq
--	----------------	------

	marital_status	Freq
1	Divorced	161
2	Married	812
3	Separated	68
4	Single	$X$
5	Widowed	223
Total		1691

A. Find the value of  $X$ , the count of residents who are single.  $X=$

B. Find the proportion of residents who are widowed:  $\hat{p}_{Widowed}=$

. (Use a decimal number rounded to 3 decimal places).

Answer 1:

427

Correct!

Answer 2:

you Answered

Incorrect Answer

0.132

Incorrect Answer

.132

Incorrect Answer

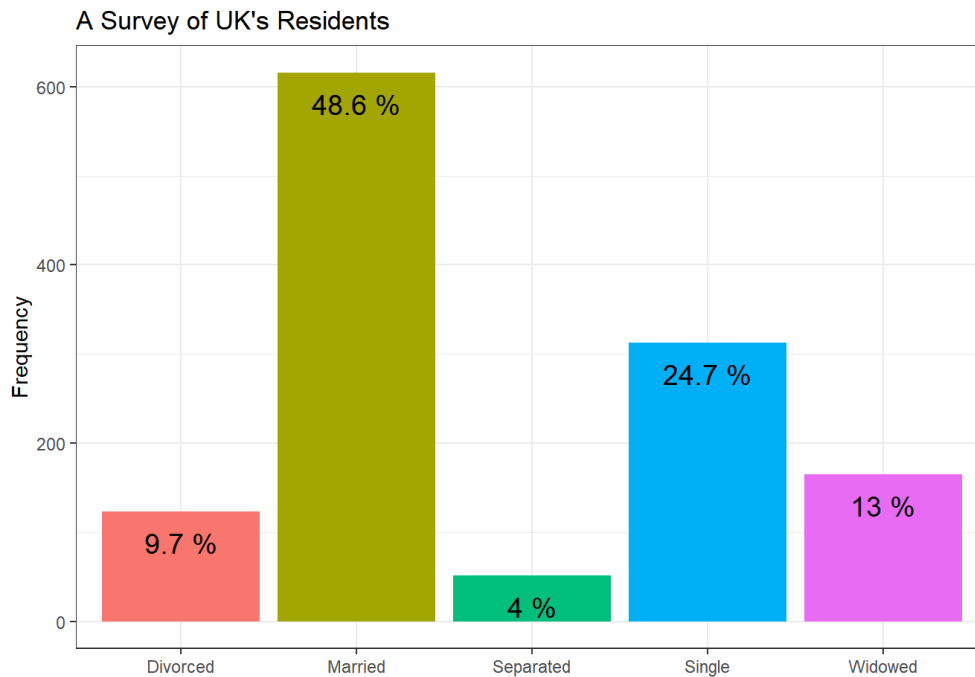
13.2%

## Question 4

2 / 2 pts

UK Residents Survey:

The following graph summaries a survey of some UK residents about their marital status:



According to the graph, the survey participants were divorced (9.7%), married (48.6%), separated (4%), single (24.7%), or widowed (13%).

Choose the marital status levels from high to low percentages:

Married XXXXXXXXXXXXXXXXXXXXXXXXXX|

[ Select ]



XXXXXXXXXXXXX|

[ Select ]



XXXXXX|

[ Select ]



XXXXX|

[ Select ]



XX

Ordering the levels in a bar graph produces a **Pareto** graph, which makes finding the least and most frequent levels very easy.

Answer 1:

Correct!

Married

Answer 2:

**Correct!**

Single

**Answer 3:****Correct!**

Widowed

**Answer 4:****Correct!**

Divorced

**Answer 5:****Correct!**

Separated

Great job.

Quiz Score: **5** out of 8