



Statistics for Social Sciences I

Test 1 (A)

Name: _____

Group: _____ Date: _____

PROBLEM 1. (1 point) In a YouGov poll of January 2017, the following question about the Brexit deal was asked to a sample of 1654 adults.

How much confidence, if any, do you have in Theresa May to negotiate the sort of Brexit deal she says she wants for Britain?

The responses are summarized (as percentages) in the table below.

| | |
|--|-----------|
| A lot of confidence | 12 |
| A fair amount of confidence | 35 |
| TOTAL A LOT / FAIR AMOUNT OF CONFIDENCE | 47 |
| Not very much confidence | 23 |
| No confidence at all | 15 |
| TOTAL NOT MUCH / NO CONFIDENCE | 38 |
| Don't know | 15 |

The number of people surveyed who had a lot of confidence in the Prime Minister's ability to negotiate the sort of Brexit deal she wants was:

- a) 12
- b) 138
- c) 198
- d) None of the above.

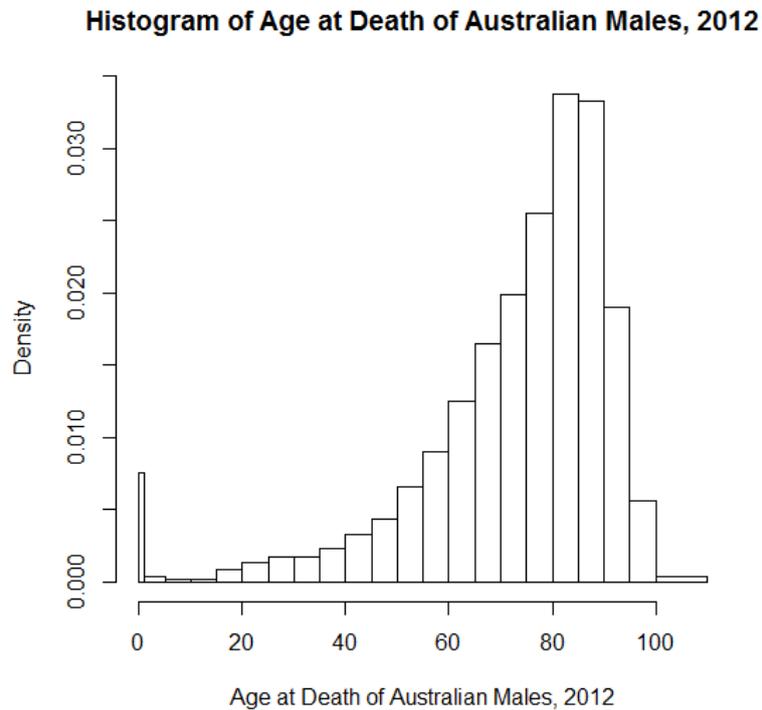
| | | | |
|----|----|----|----|
| a) | b) | c) | d) |
|----|----|----|----|

PROBLEM 2. (1 point) Referring to the survey question of Problem 1 above, the variable in this question is.

- a) Quantitative and Discrete.
- b) Qualitative and Continuous.
- c) Quantitative and Ordinal.
- d) None of the above.

| | | | |
|----|----|----|----|
| a) | b) | c) | d) |
|----|----|----|----|

PROBLEM 3. (1 point) The following histogram shows age at death for Australian men who died in 2012 and is typical of the distribution of death ages in developed, Western countries but not in undeveloped countries.



In this case:

- a) The mean age at death is lower than the median.
- b) The mean age at death is higher than the median.
- c) The standard deviation of age of death is approximately 70.
- d) None of the above.

| | | | |
|-----------|-----------|-----------|-----------|
| a) | b) | c) | d) |
|-----------|-----------|-----------|-----------|

PROBLEM 4. (3 points) The following table shows an index number reflecting how happiness levels in Spain (measured according to the World Happiness Report ratings) have changed since 2012. (Note that Norway is currently ranked the happiest country in the world and that Scandinavian countries occupy five of the first ten places according to the WHR. In 2017, Spain is the 34th ranked country in the list.)

| | | | | |
|------------------|---------|-------|---------|---------|
| Year | 2012 | 2014 | 2016 | 2017 |
| Happiness Rating | | 6.329 | | 6.403 |
| Index Number | 100.000 | | 100.617 | 101.281 |

Complete the remainder of the table. (Show your calculations on the extra sheet).

PROBLEM 5. (1 point) The following graphic compares levels of well-being (according to the Better Life Index) and wealth (according to GDP per person) in a number of different countries.



In this case:

- a) The correlation between well-being and wealth is positive and the interquartile range of the wealth data is approximately 30.
- b) The correlation between well-being and wealth is zero and the range of the well-being data is approximately 3.
- c) The correlation between well-being and wealth is negative and the range of wealth data is approximately 30.
- d) None of the above.

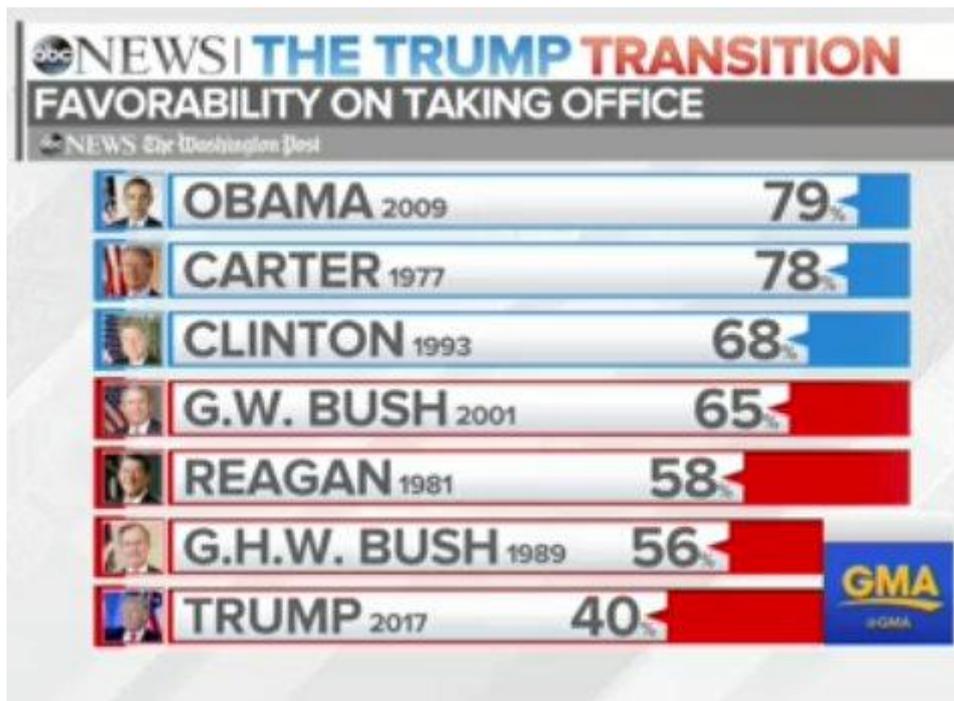
| | | | |
|-----------|-----------|-----------|-----------|
| a) | b) | c) | d) |
|-----------|-----------|-----------|-----------|

PROBLEM 6. (1 point) In the histogram of Problem 3, not all bar widths are the same. Therefore,

- a) The heights of the bars are just proportional to frequency like any other histogram.
- b) The heights of the bars are calculated according to the formula height = frequency x width.
- c) The heights of the bars are calculated according to the formula height = frequency / width.
- d) None of the above.

| | | | |
|-----------|-----------|-----------|-----------|
| a) | b) | c) | d) |
|-----------|-----------|-----------|-----------|

PROBLEM 7. (2 points) The following graphic illustrating the favourability ratings of different US presidents on taking office appeared recently on ABC News.



Comment on the graphic. What do you think is good and bad about it? Are there any alternatives that might be considered?

Space for calculations