



Statistics

Exercises 6

- The following table taken from a July 2018 YouGov polls shows the responses to whether or not the queen should meet Donald Trump when he next visits the UK. The responses are categorized according to what people voted in the 2017 elections, vote in the EU (Brexit) referendum, gender and age respectively. Note that each column in the lower part of the table sums to 100% (up to rounding errors).

Sample Size: 1648 GB Adults
Fieldwork: 9th - 10th July 2018

	Vote in 2017			2016 EU Ref		Gender		Age				
Total	Con	Lab	Lib Dem	Remain	Leave	Male	Female	18-24	25-49	50-64	65+	
Weighted Sample	1648	565	541	101	648	704	798	850	185	695	391	377
Unweighted Sample	1648	560	525	107	714	671	748	900	157	691	410	390
	%	%	%	%	%	%	%	%	%	%	%	%

As part of his visit, do you think the Queen should or should not meet Donald Trump?

Should	35	55	17	30	21	51	41	30	36	29	40	43
Should not	49	34	69	56	65	35	47	50	48	53	46	44
Don't know	16	11	14	15	14	14	11	20	16	18	15	13

- What proportion of the people surveyed think the Queen should meet with Trump?
 - What proportion of "Remainers" think the Queen should meet with Trump?
 - Among the people who say that the Queen should meet with Trump, what is the proportion of "Remainers"?
 - Is there any evidence that the vote in the 2016 election and the opinion about whether the Queen should meet with Trump are related? Briefly explain your answer.
- In the USA, (according to a recent study by the Pew Research Centre) approximately 48% of voters identify themselves as Democrats and 44% identify themselves as Republicans and the remainder may be classified as Independents. Approximately 75% of Republicans support the Death penalty, while amongst Independents, support is around 55% and this falls to 40% amongst Democrats.

What is the proportion of Americans who support the death penalty?

3. The following results come from a recent ICM poll for The Guardian newspaper.

Table 7

Q2. Which of the following outcomes to recent Brexit negotiations...

- Best for the country as a whole

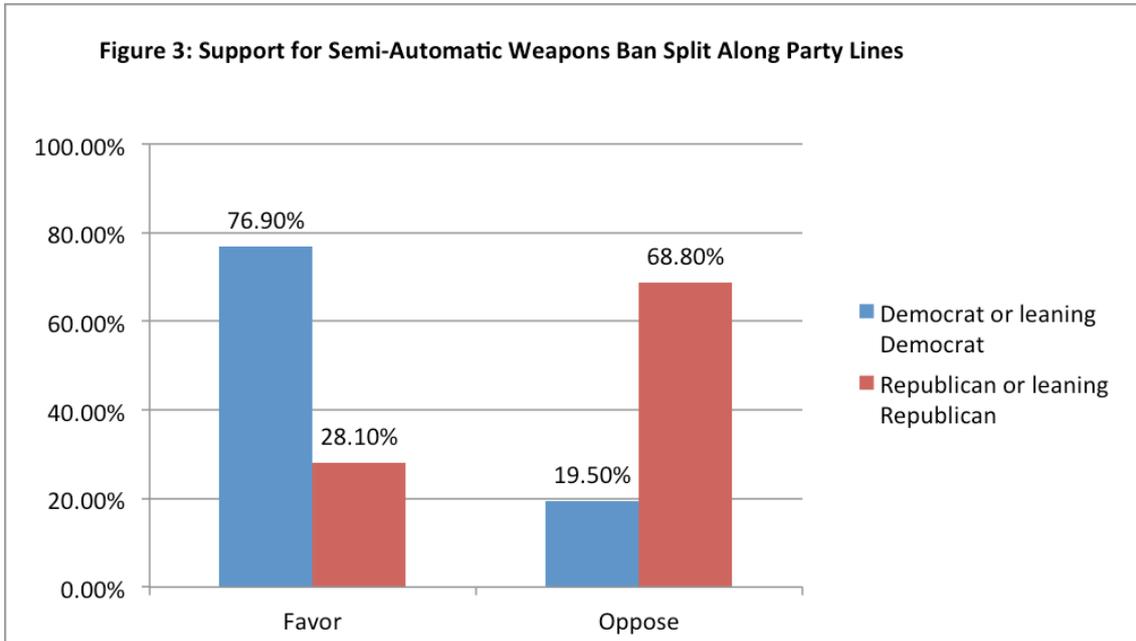
Base: All respondents

	<u>Gender</u>		
	<u>Total</u>	<u>Male</u>	<u>Female</u>
Unweighted base	2049	948	1101
Weighted base	2049	1008	1041
The UK leaves the EU on time with no deal of any kind	318 16%	176 18%	142 14%
The UK leaves the EU on time with a deal along the lines set out in the Chequers plan	213 10%	109 11%	104 10%
The UK leaves the EU on time with a 'harder' version of Chequers - more like a Canada-style free trade deal	445 22%	249 25%	196 19%
The UK leaves the EU on time with a 'softer' version of Chequers - more like a Norway arrangement	212 10%	76 8%	136 13%
The UK leaves the EU on time but with the future trade relationship still in many ways unresolved - a so-called 'blind Brexit'	55 3%	32 3%	23 2%
Article 50 gets delayed, so that the UK does not leave in March next year, to allow more time for talks	163 8%	62 6%	101 10%
The UK decides to stay in the EU after a second referendum	643 31%	303 30%	340 33%

You can use the weighted base to answer the following questions.

- a) True or false? 16% of the total people surveyed think the best outcome for the country as a whole is for the UK to leave the EU on time with no deal of any kind.
- b) True or false? 18% of the people surveyed are male and think the best outcome for the country as a whole is for the UK to leave the EU on time with no deal of any kind.
- c) Calculate the relative frequency gender distribution of the people who decide that the best deal is for the UK to decide to stay in the EU after a second referendum.

4. The following graphic comes from a 2013 survey of attitudes to gun control in the USA. The survey was carried out on 1110 adults.



If 601 of the survey respondents were Democrat or leaning Democrat and that the rest were Republican or leaning Republican, the number of respondents in favour of a ban on automatic weapons is:

- a) 605
- b) 105
- c) 583
- d) None of the above.