

**Calculators are permitted but working must be shown.**

**Essential knowledge:**

- The stem-&-leaf diagram shows the heights of a sample of tomato plants.
  - Write out level 5 in full.
  - What height is the tallest plant?  $n = 16$
  - How many plants were in the sample?

Height of Plant (cm)

2	1	3						
3	0	2	2	7				
4	4	5	6	8	9	9		
5	6	7	9					
6	3							

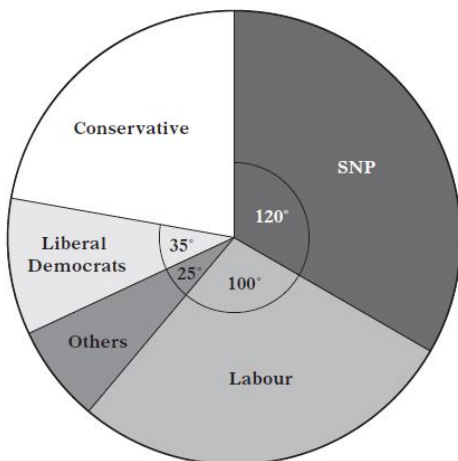


2 | 1 Represents 21 cm

- A box contains 14 counters numbered 1 to 14. What is the probability that a counter chosen at random will have a number larger than 9 on it?

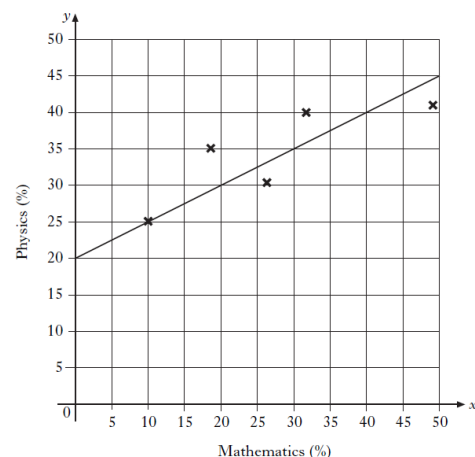


3.



A survey of 1800 first time voters was carried out. The pie-chart shows how they will vote at the next election. How many of the 1800 first time voters would vote Conservative?

- The scattergraph shows the comparison between the Maths and Physics test results of a group of pupils. Use the line of best fit to estimate the Physics mark of a pupil who got 35% for Mathematics.



**Unit level:**

- There are 400 people in a studio audience. The probability that a person chosen at random will be male is  $\frac{5}{8}$ . How many males are in the audience?

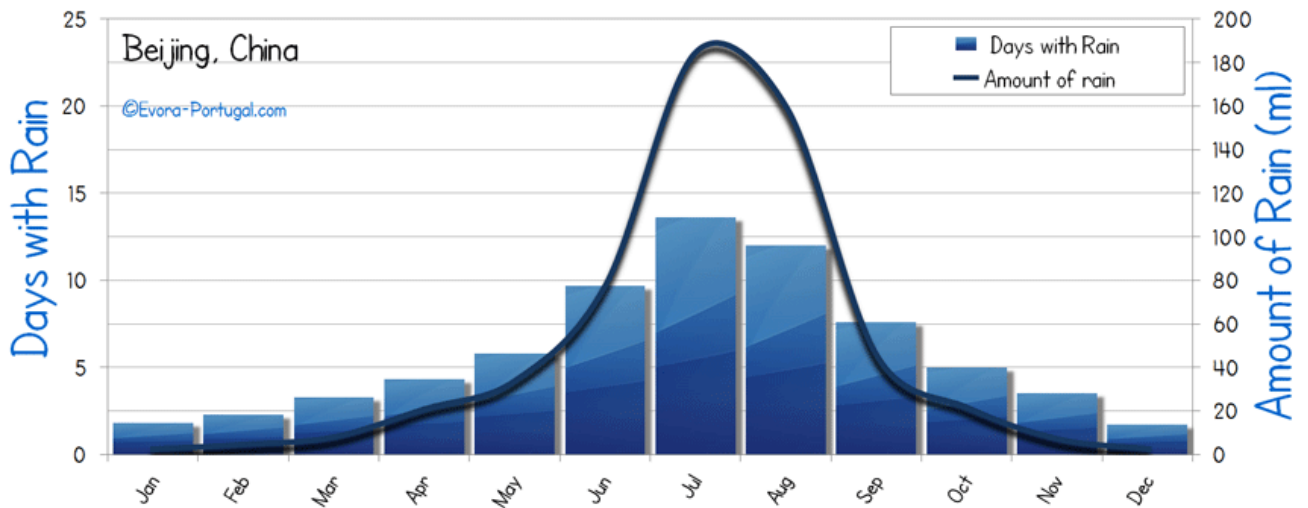
6.

Girls					Boys				
			1	3					
			9	4	7	9			
8	7	4	3	2	5	2	3	4	4
			9	4	6	6	7	9	
			9	6	3	7	4	8	
			8	1	8	7			
n = 15					n = 14				

The back-to-back stem and leaf diagram shows the results of a class test. Calculate the **mean** mark for the boys and the girls, determine which sex did better and by how much.

Key		
3	7	represents 73%
8	7	represents 87%

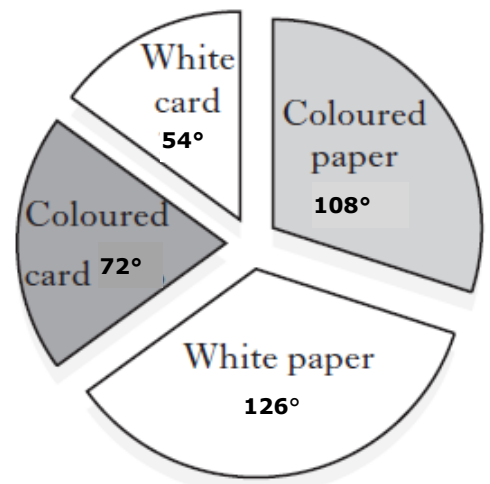
7. Using the graph below:



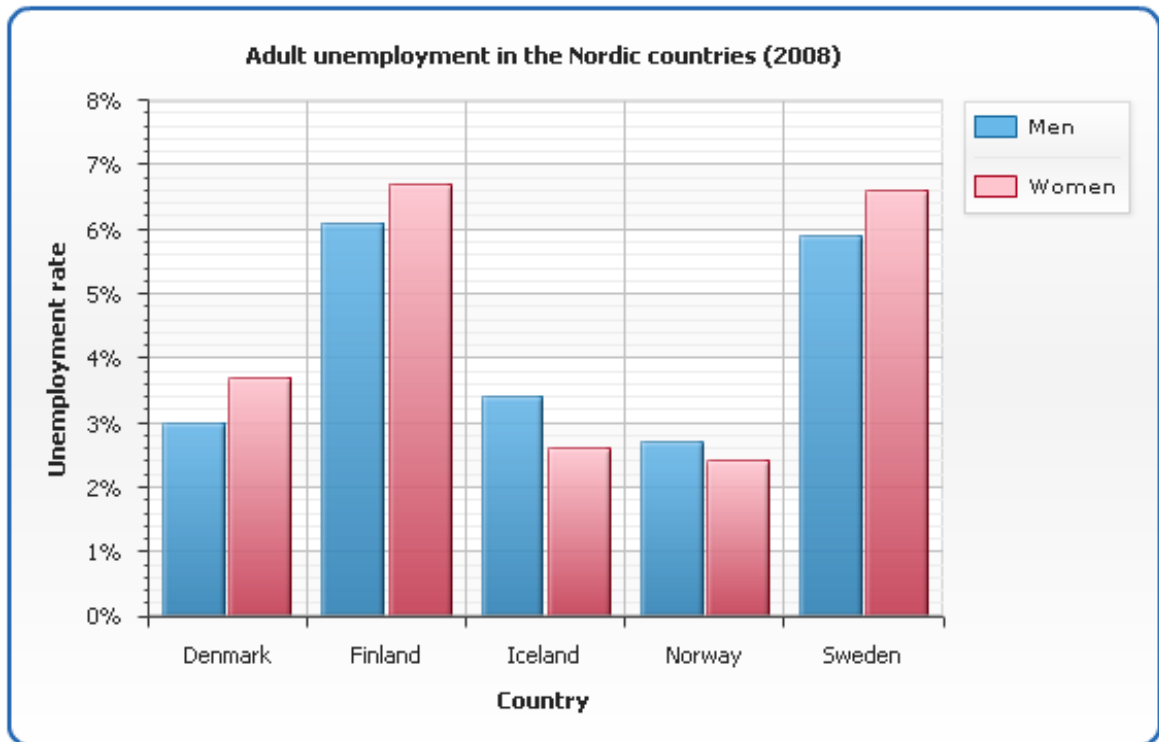
- a. What months of the year had more than 10 days of rain?
- b. How many months had less than 70 millilitres of rain?

8. The school's ECO group is collecting card and paper for re-cycling.

If the weight of White card collected was 90 kilogrammes, what weight of **White paper** was collected?

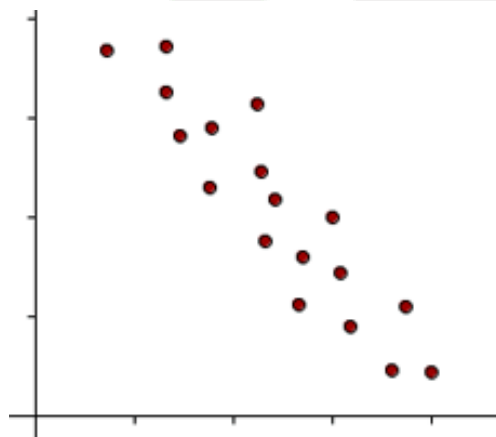


9. The comparative bar chart below shows the number of men compared to women who were unemployed in Nordic countries in 2008.



- a) What percentage of women were unemployed in Sweden?
- b) How many percent more men were unemployed in Iceland than Women?
- c) If there are 2,400,000 women in Denmark, how many of them were unemployed?

10. Describe the correlation of the scattergraph below.



**Assessment level:**

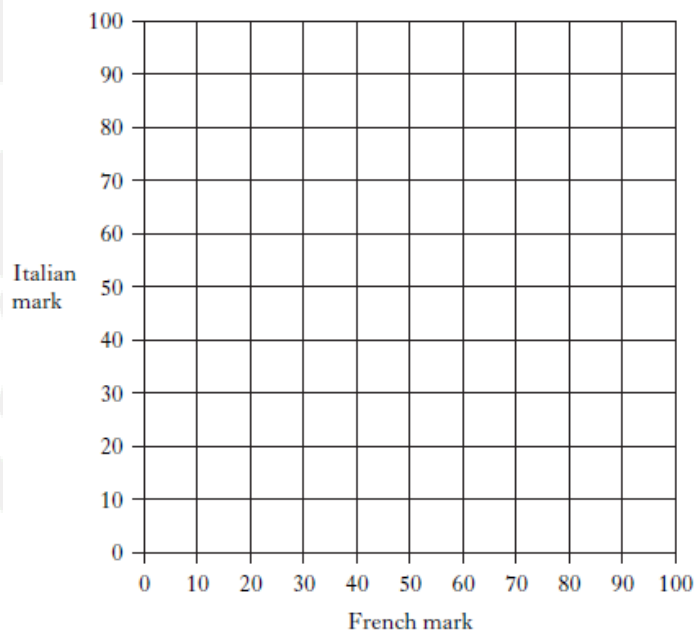
- 11.** 150 patients are given a flu vaccine. What is the probability that a patient, chosen at random, will be aged 5 or under?

AGE	GENDER	
	male	female
5 or under	4	3
6 – 15	7	8
16 – 59	37	47
60 or over	12	32

- 12.** The table shows the marks scored by students in French and Italian exams.

Pupil	A	B	C	D	E	F	G	H
French Mark	15	23	50	38	40	42	70	82
Italian Mark	28	31	62	54	45	55	85	95

Use these marks to copy and complete the Scattergraph below.



Draw a line of best fit and use it to predict the French mark of a student who got 65 for **Italian**.