Paper 6

Test time: 30 minutes

1 The chart shows the distances, in kilometres, between some French cities.

Dijon	Lyon	Marseille	Nantes	Paris	Rennes
194					
503	313				
639	685	985			
315	466	775	385		
622	740	1050	110	353	

(a) Pierre wants to travel from Lyon to Rennes. How far is this? _____ (1)

(b) What is the distance between Nantes and the next closest city. _____ (1)

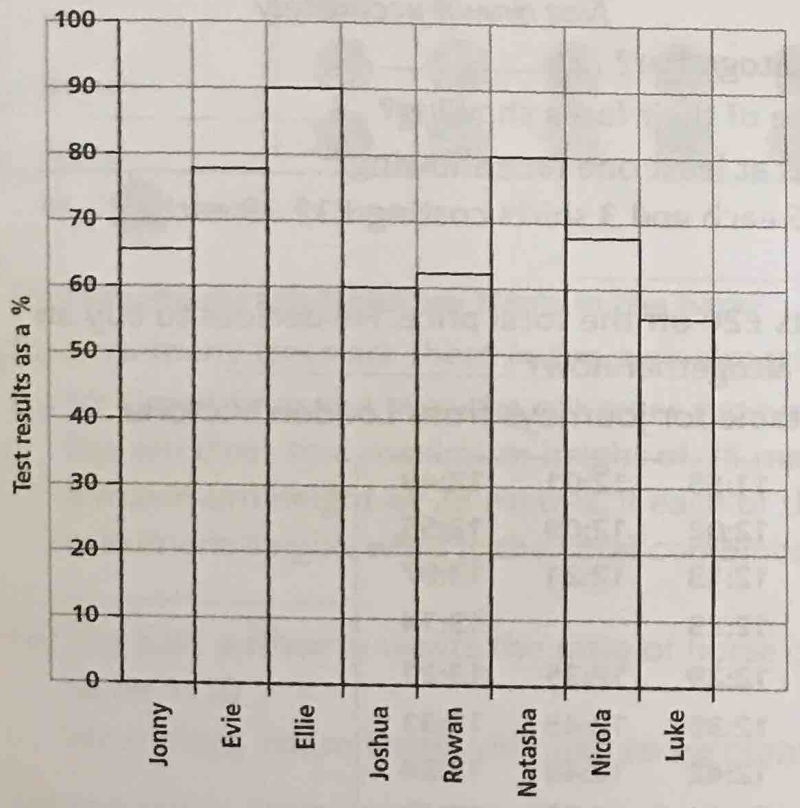
(c) What is the difference in the distance between Marseille and Rennes and Marseille and Paris? _____ (3)

2 Freddie ran for 3 hours at an average speed of 12 km/h and for a further 20 minutes at 9 km/h.

(a) What total distance did Freddie cover? _____ (3)

(b) What was Freddie's average speed for his run? _____ (3)

3 The chart shows some test results from a class spelling test.



(a) What was the average percentage score in the test? _____ (2)

(b) The test contained 50 spellings. How many more spellings did Natasha get right than Luke? _____ (3)

(c) What is the range of spelling scores for these eight children? _____ (2)

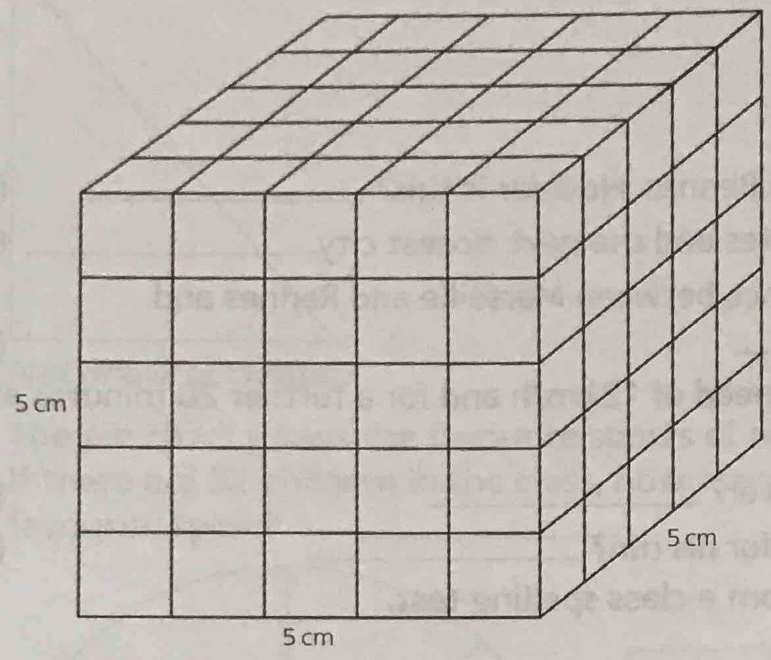
4 Jensen's car travels 9 km on a litre of fuel.

(a) How much fuel will he need for a journey of 450 km? _____ (1)

(b) Fuel costs £1.10 per litre. How much will the fuel for this journey cost?

_____ (1)

5 A cube with sides of 5 cm is made up of 1 cm cubes.



Not drawn accurately

(a) How many 1 cm cubes are there altogether? _____ (1)

(b) How many of the cubes have none of their faces showing? _____ (2)

(c) What percentage of the cubes has at least one face showing? _____ (1)

6 Michael buys 7 silk ties costing £8.95 each and 3 shirts costing £11.99 each.

(a) How much is this altogether? _____ (3)

(b) If he spends £100 or more, he gets £20 off the total price. He decides to buy an extra tie. How much does he pay altogether now? _____ (2)

7 Thomas is looking at the train timetable for journeys from London Victoria.

London Victoria	10:06	10:34	11:55	12:01	12:48
Clapham Junction	10:13	10:41	12:02	12:09	12:55
East Croydon	10:28	10:52	12:13	12:21	13:07
Purley	10:34		12:23		13:14
Redhill	10:41		12:29	12:35	13:21
Gatwick	10:55	11:08	12:39	12:45	13:31
Three Bridges	10:58	11:11	12:42	12:48	13:34
Haywards Heath	11:07	11:20	12:52	12:58	13:43
Brighton	11:25	11:38	13:11	13:18	14:01

(a) How long will it take him to get to from London Victoria to Brighton if he catches the 10:34 train? _____ (1)

(b) If Thomas needs to be at Gatwick for 12:30, which train should he catch?

_____ (1)

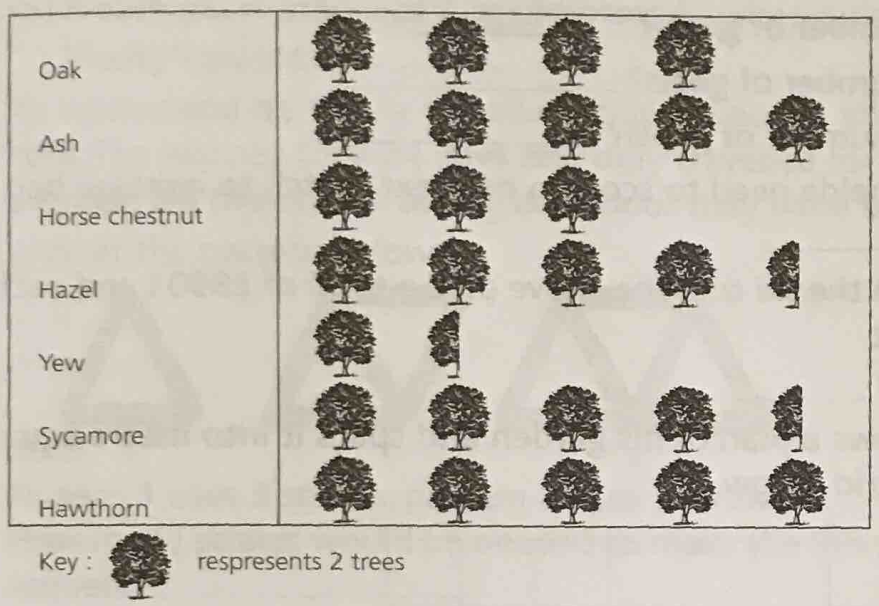
(c) The 11:55 train from London Victoria arrives at Haywards Heath 9 minutes late. At what time does it arrive? _____ (1)

(d) Gordon arrives at East Croydon station at 12:25 and catches the next train to Brighton. How long after he arrives at East Croydon station does he arrive in Brighton? _____ (1)

(e) 536 000 passengers arrive in London by train between 07:00 and 10:00 each weekday morning. During the whole day, 981 000 arrive in London by train. How many people arrive in London by train outside of the hours of 07:00 to 10:00?

_____ (1)

8 Mr Green recorded the types of trees in the park. The pictogram below shows his results.



(a) How many ash trees are there in the park? _____ (1)

(b) How many trees are there in the park altogether? _____ (2)

(c) Mr Green finds out that the oak trees grow to a maximum height of 40 metres, the ash trees to a maximum height of 35 metres and the horse chestnut trees to a maximum height of 28 metres. If each of these trees in the park grows to its maximum height, what is the total combined height of these trees, in metres?

_____ (4)

(d) The park authority wants the ratio of horse chestnut trees to other trees in the park to be 1 : 10

How many more trees will need to be planted? _____ (2)

(e) In a storm, for every 2 trees blown down, 3 are left standing. How many trees are left standing? _____ (2)

9 The list below shows the number of goals Romelda has scored in her last 24 netball matches.

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

(a) Complete the tally chart below. (1)

Number of goals	Tally of goals scored	Frequency
2		
3		
4		
5		
6		
7		
8		
9		

(b) What is Romelda's mean number of goals? _____ (2)

(c) What is Romelda's modal number of goals? _____ (1)

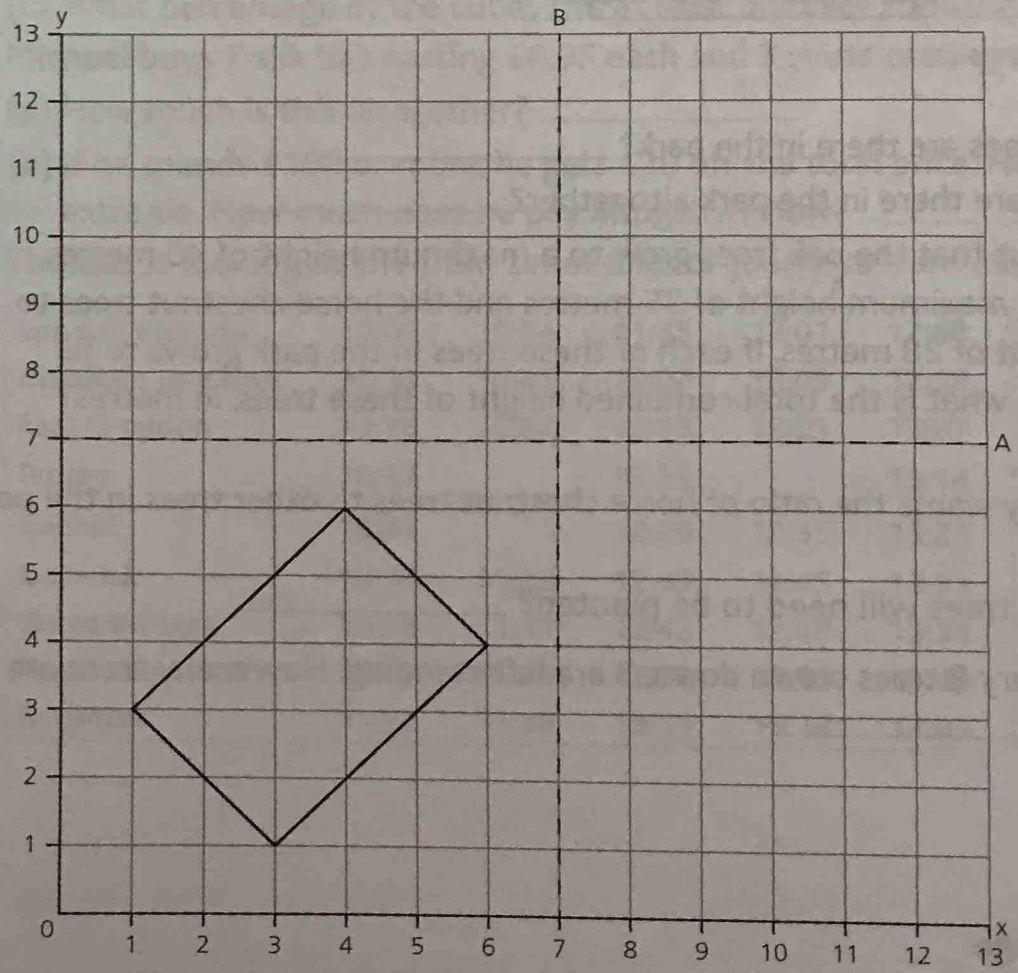
(d) What is Romelda's median number of goals? _____ (2)

(e) How many goals would Romelda need to score in her next match to increase her mean score to 6? _____ (2)

10 Mr Reeve is taking 9 children on the ski trip. They have paid a total of £8901 and each child has paid the same amount.

How much has each child paid? _____ (1)

11 Percy's garden is 13 m². He draws a plan of his garden and splits it into metre squares as shown on the co-ordinate grid below.



(a) What are the co-ordinates of the vertices of the large rectangular paving stone shown? (1)

(____, ____) (____, ____) (____, ____) (____, ____)

(b) Percy wants to lay three more paving stones in his garden. He works out the position of the next paving stone by reflecting the original paving stone in the dashed line labelled 'A'. Mark the position of this stone on the co-ordinate grid. (1)

(c) To find the position of the other two paving stones, reflect both the existing paving stones in the dashed line labelled 'B'. Mark the position of the two new stones on the co-ordinate grid. (2)

12 Andrew is thinking of a number, x. When he multiplies x by 9 and then halves the result, the answer is 27

What is Andrew's number, x? _____ (2)

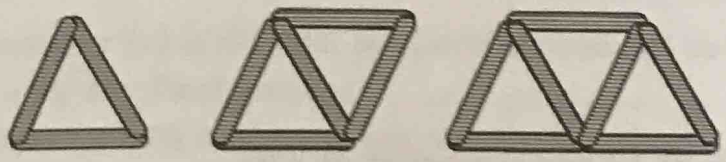
13 Monty plants 25 rows of potatoes with 48 potato plants in each row.

(a) How many potato plants is this altogether? _____ (1)

(b) If each plant produces 2 kg of potatoes, what is the total mass of potatoes from Monty's plants? _____ (1)

14 Mr Wicker and his family travelled 3936 km across the USA from Los Angeles to New York. The journey took 24 days and they travelled for 8 hours each day. How far, on average, did they travel during each hour they were travelling? _____ (2)

15 Look at the pattern below.

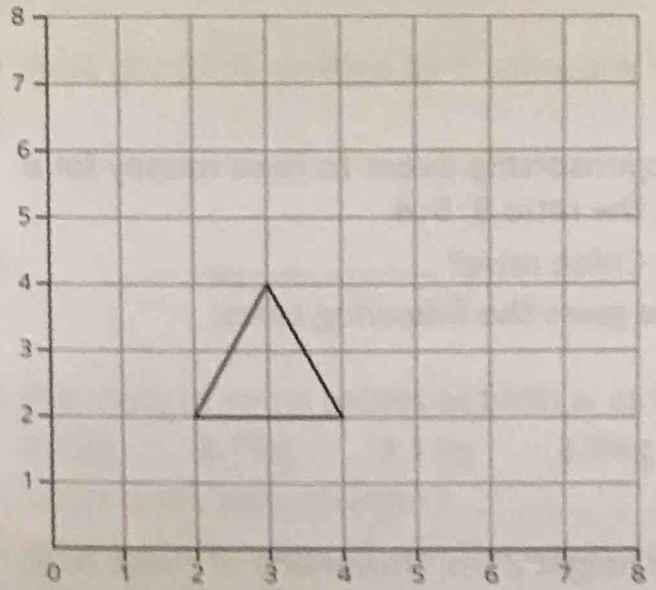


Pattern 1 2 3

Pattern 1 uses 3 straws, pattern 2 uses 5 straws, ...

How many straws would be needed to make the 9th pattern in the sequence? _____ (2)

16 Look at the triangle on the grid.



The original triangle is translated three squares to the right and one square upwards. Mark the position of the resulting triangle on the grid. (1)

Record your results and move on to the next paper

Score ____ / 67 Time ____ : ____