

1. Here is part of a railway timetable.

Manchester	07 53	09 17	10 35	11 17	13 30	14 36	16 26
Stockport	08 01	09 26	10 43	11 25	13 38	14 46	16 39
Macclesfield	08 23	09 38	10 58	11 38	13 52	14 58	17 03
Congleton	08 31	–	–	11 49	–	15 07	17 10
Kidsgrove	08 37	–	–	–	–	–	17 16
Stoke-on-Trent	08 49	10 00	11 23	12 03	14 12	15 19	17 33

A train leaves Manchester at 10 35.

(a) At what time should this train arrive in Stoke-on-Trent?

.....

(1)

Doris has to go to a meeting in Stoke-on-Trent.

She will catch the train in Stockport.

She needs to arrive in Stoke-on-Trent before 2 pm for her meeting.

(b) Write down the time of the latest train she can catch in Stockport.

.....

(1)

(c) Work out how many minutes it should take the 14 36 train from Manchester to get to Stoke-on-Trent.

..... minutes

(1)

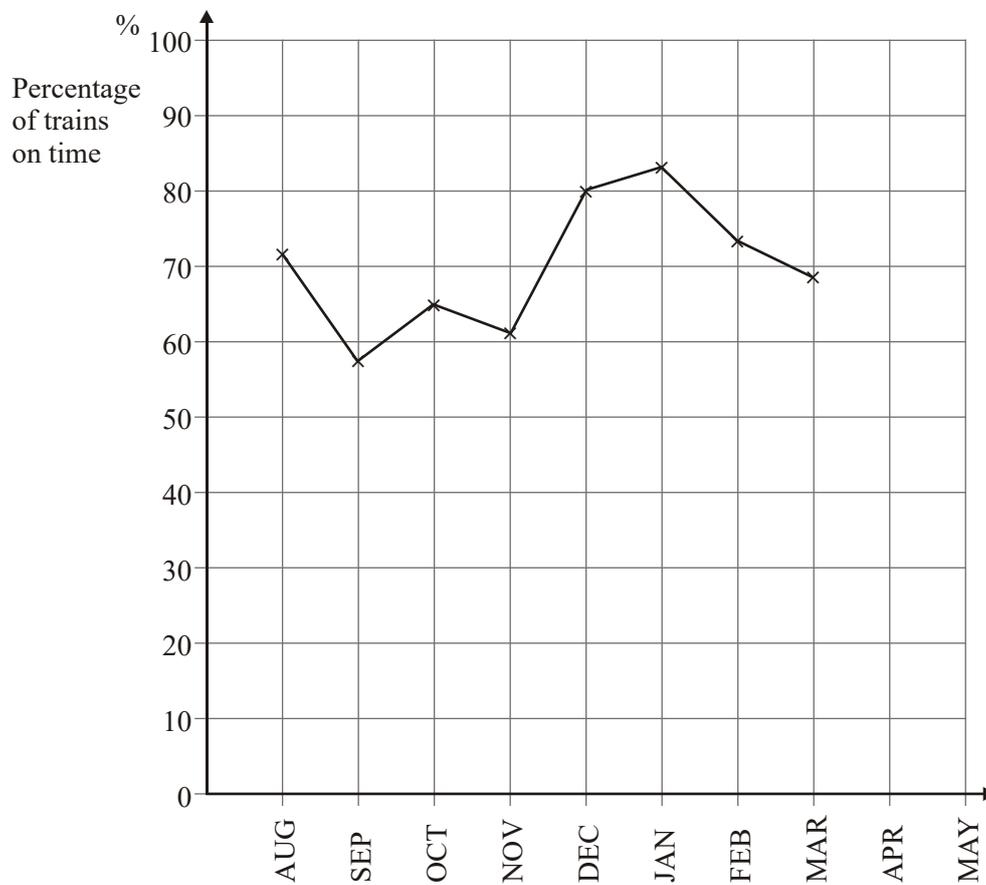
The 14 36 train from Manchester to Stoke-on-Trent takes less time than the 16 26 train from Manchester to Stoke-on-Trent.

(d) How many minutes less?

..... minutes

(2)

The graph shows the percentage of trains each month that arrived on time from August to March.



(e) Use the graph to write down the

(i) percentage of trains which arrived on time in December,

..... %

(ii) lowest percentage of trains which arrived on time.

..... %

(2)

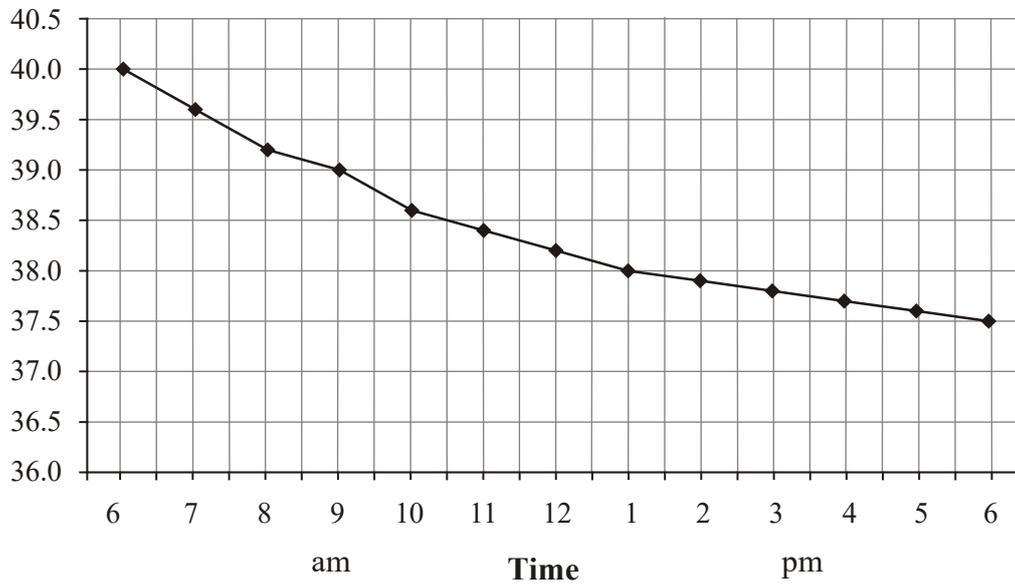
The percentage for April was 70% and for May was 62%.

(f) Complete the graph for April and for May.

(2)

(Total 9 marks)

2. José is in hospital.
Here is his temperature chart during one day.



- (a) At what time was José's temperature 39.0°C?

.....

(1)

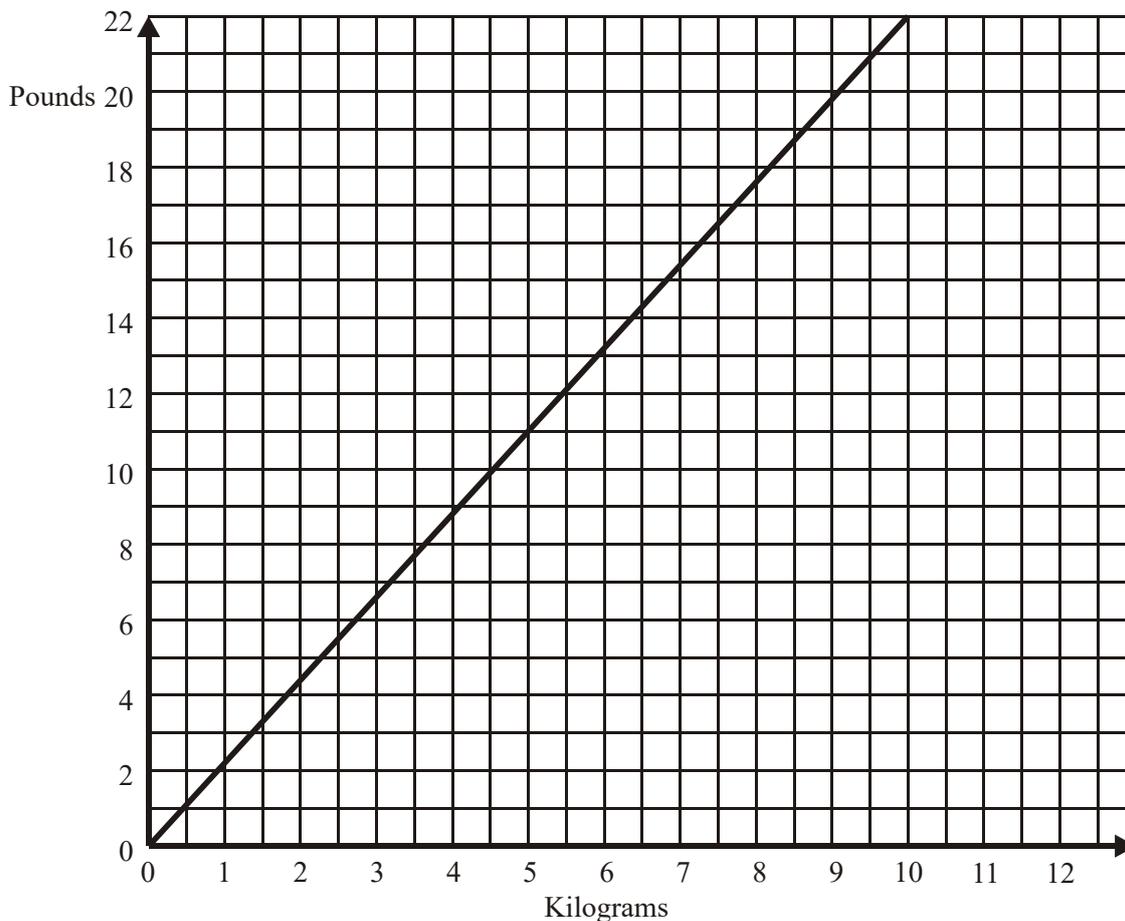
- (b) What can you say about José's temperature from 6 am to 6 pm?

.....

(1)

(Total 2 marks)

3.



The conversion graph above can be used for changing between kilograms and pounds.

(a) Use the graph to change 22 pounds to kilograms.

..... kg

(1)

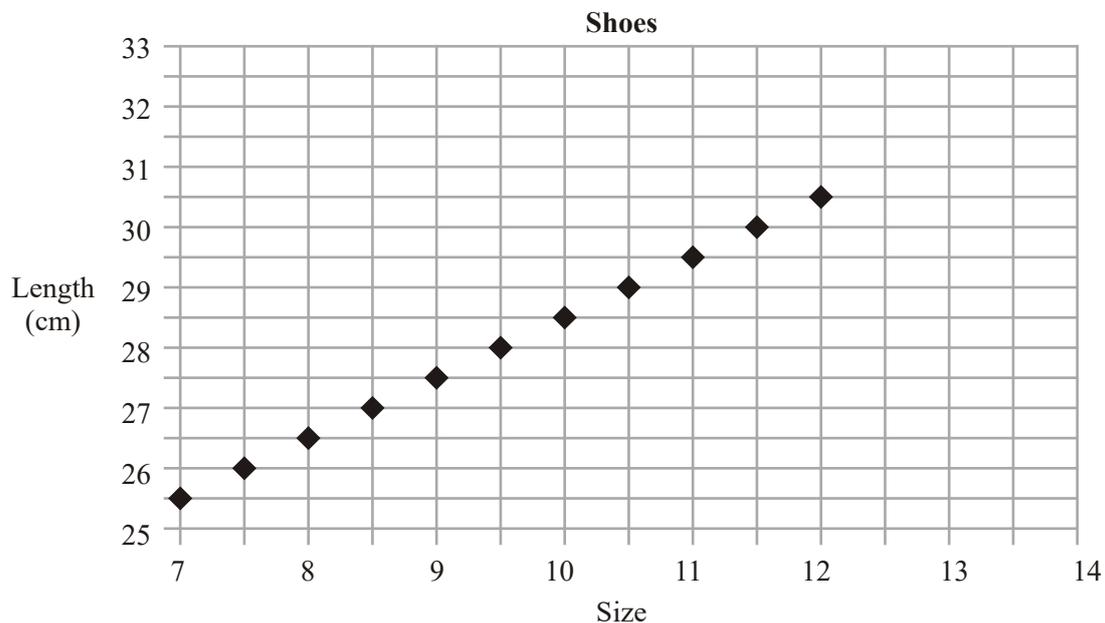
(b) Use the graph to change 2.5 kilograms to pounds.

..... pounds

(1)

(Total 2 marks)

4. Each point on the graph represents the size of a shoe and its length, in cm.



- (a) Write down the length of a size 9 shoe.

.....cm

(1)

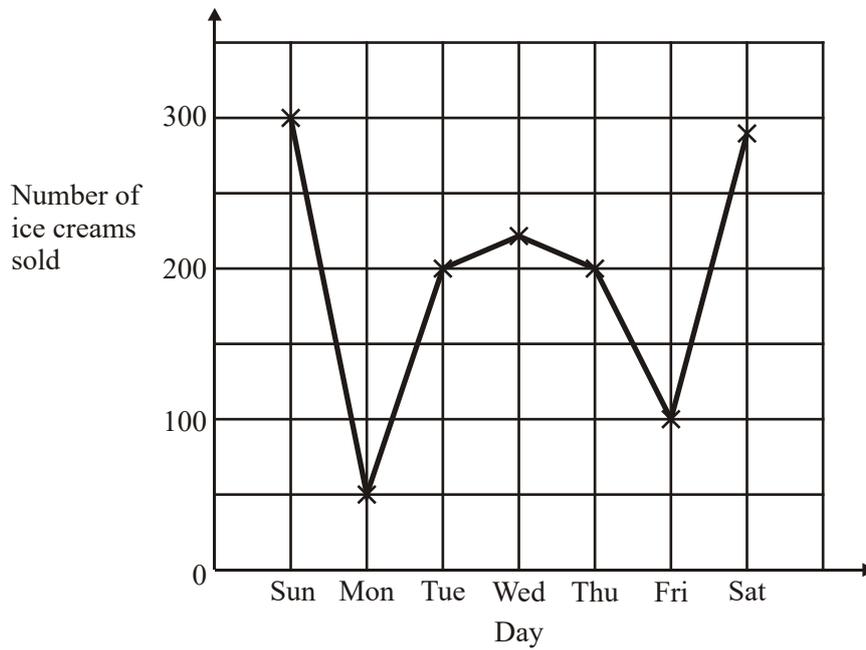
- (b) Write down the size of a shoe with a length of 29.5 cm.

.....

(1)

(Total 2 marks)

5. The graph shows the number of ice creams sold each day during one week.



How many more ice creams were sold on Tuesday than on Monday?

.....ice creams
(Total 1 mark)

01.	(a)	1123		1	
			<i>B1 cao</i>		
	(b)	1125		1	
			<i>B1 cao</i>		
	(c)	43		1	
			<i>B1 cao</i>		
	(d)	24		2	
		67 – “43”			
			<i>M1 for 67 – “43”</i>		
			<i>A1 ft from “43”</i>		
	(e)	(i)	80	2	
			<i>B1 cao</i>		
		(ii)	56 – 58		
			<i>B1 answer in range 56 to 58 inc</i>		
	(f)	Completes graph		2	
			<i>B2 for (Apr, 70) and (May, 60 < p < 65) plotted and joined</i>		
			<i>(B1 for one point plotted)</i>		
					[9]
02.	(a)	09 00		1	
			<i>B1 accept 9 or 9 am</i>		
	(b)	It went down		1	
			<i>B1 for It gets less oe</i>		
			<i>B0 for any contradictions</i>		
					[2]
03.	(a)	10		1	
			<i>B1 cao</i>		
	(b)	5.5		1	
			<i>B1 ±0.3</i>		
					[2]
04.	(a)	27.5		1	
			<i>B1 accept 27 1/2</i>		

(b) 11 1
Bl cao [2]

05. 150 1
Bl for 150 ± 5 [1]

01. Mathematics A

Paper 2

The success rates on each of the first four parts varied considerably within centres. The first two parts were quite well answered, although 13 38 appeared frequently in part (b). 83 (1519 – 1436) was a common wrong answer to part (c) and it was possible to obtain the correct answer (24) in part (d) using this incorrect approach ($107 - 83$). In such cases, no marks were awarded. Errors were rare in parts (e) and (f).

Paper 4

This was a good question to start the paper, as many candidates had little difficulty in attempting the question. Use of the protractor caused inevitably problems for some. There were more errors in drawing the angle inaccurately in part (a), though reading off using the wrong scale was an obvious error in part (b) with answers of 115° to 117° .

Mathematics B Paper 15

Parts (a) and (b) were answered well by nearly all candidates. In (b) the most popular incorrect response was 13 38. Here candidates did not read the question correctly and gave the time of the last train to leave Stockport before 2 pm.

There were not many correct responses to parts (c) and (d). Many candidates failed to show any working, whilst others tried to find the difference between the two times by doing a subtraction sum of $107 - 83$, assuming that the times were in base 10. Similarly, the incorrect response of 83 in part (c) was frequently seen.

Parts (e) and (f) proved to be good confidence building questions with many fully correct responses.

02. Foundation Tier

This question was both well understood and well answered.

Intermediate Tier

Part (a) was well attempted by most candidates and a large number of fully correct tables were seen. The most common error was in the calculation of the y value for $x = -1$. Surprisingly, in part (b), many candidates did not associate the table from (a) with what they were being asked to do. Many of those with a correct table did not plot anything at all and some drew lines that bore no resemblance to the table. As incorrect lines passing through $(0, 1)$ were quite common it could be that these candidates were using $y = mx + c$. Part (c) was poorly answered. A large number of correctly drawn graphs gave rise to no answers or to incorrect answers. Even though the question asked candidates to “use your diagram” many attempted to work out the values algebraically or, more commonly, by trial and error. These attempts rarely succeeded.

- 03.** The conversion graph was usually correctly used to obtain the kg in part (a). Part (b) was split between those within the tolerance and those around 4.5.
- 04.** This proved to be a popular starter question with over 90% of the candidates scoring both available marks.
- 05.** This question was very well done, with few candidates failing to gain the mark.