



# Data Non Calculator

*Revision Pack*

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27 minutes

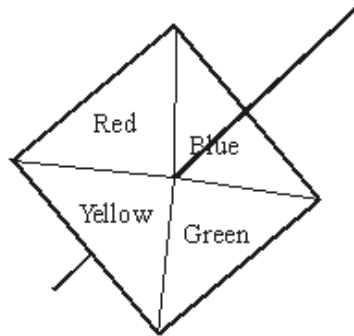


28 marks

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*To use alongside [mymaths.co.uk](http://mymaths.co.uk) and [livemaths.co.uk](http://livemaths.co.uk) to revise for your GCSE exam*

**Q1.** Here is a 4-sided spinner.



The sides of the spinner are labelled Red, Blue, Green and Yellow.

The spinner is biased.

The table shows the probability that the spinner will land on each of the colours Red, Yellow and Green.

Colour	Red	Blue	Green	Yellow
Probability	0.2		0.3	0.1

Work out the probability the spinner will land on Blue.

.....

**(Total 2 marks)**

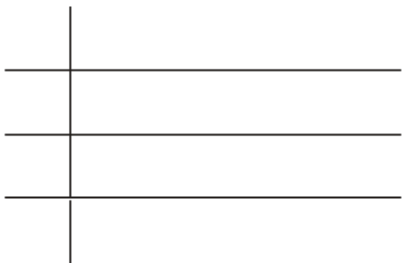
**Q2.** Here are the ages, in years, of 15 teachers.

35 52 42 27 36

23 31 41 50 34

44 28 45 45 53

Draw an ordered stem and leaf diagram to show this information.  
You must include a key.



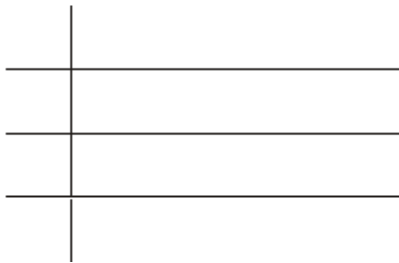
Key:
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**(Total 3 marks)**

**Q3.** Here are the ages, in years, of 15 teachers.

35	52	42	27	36
23	31	41	50	34
44	28	45	45	53

- (a) Draw an ordered stem and leaf diagram to show this information.  
You must include a key.



Key:

(3)

One of these teachers is picked at random.

- (b) Work out the probability that this teacher is more than 40 years old.

.....

(2)

(Total 5 marks)

**Q4.** Naomi wants to find out how often adults go to the cinema.

She uses this question on a questionnaire.

“How many times do you go to the cinema?”

Not very often

Sometimes

A lot

(a) Write down **two** things wrong with this question.

1 .....

.....

2 .....

.....

(2)

(b) Design a better question for her questionnaire to find out how often adults go to the cinema.

You should include some response boxes.

(2)

(Total 4 marks)

**Q5.** The two-way table gives some information about how 100 children travelled to school one day.

	Walk	Car	Other	Total
Boy	15		14	54
Girl		8	16	
Total	37			100

(a) Complete the two-way table.

(3)

One of the children is picked at random.

(b) Write down the probability that this child walked to school that day.

.....

(1)

(Total 4 marks)

**Q6.** Fred is going to take a survey of the magazines read by students.

He wants to design a questionnaire.

- (a) Design a suitable question that he could use to find out what types of magazine students read.

(2)

Fred put the question below on his questionnaire.

'How many magazines have you read?'

A few

A lot

- (b) Design a better question.  
You should include some response boxes.

(2)

(Total 4 marks)

**Q7.** The two-way table gives some information about how 100 children travelled to school one day.

	Walk	Car	Other	Total
Boy	15		14	54
Girl		8	16	
Total	37			100

- (a) Complete the two-way table.

(3)

One of the children is picked at random.

(b) Write down the probability that this child walked to school that day.

.....

(1)

One of the girls is picked at random.

(c) Work out the probability that this girl did **not** walk to school that day.

.....

(2)

**(Total 6 marks)**

**M1.**

Working	Answer	Mark	Additional Guidance
$1 - (0.1 + 0.2 + 0.3)$	0.4	2	<b>M1</b> for $1 - (0.1 + 0.2 + 0.3)$ oe or 0.6 oe seen <b>A1</b> for 0.4 oe
<b>Total for Question: 2 marks</b>			

**M2.**

Answer	Mark	Additional Guidance
$\begin{array}{r l} 2 & 378 \\ 3 & 1456 \\ 4 & 12455 \\ 5 & 023 \end{array}$ $2   3 = 23$	3	<b>M1</b> for using 2, 3, 4 and 5 as stem <b>A1</b> for ordered stem and leaf diagram <b>A1</b> for consistent key, e.g. $2   3 = 23$ (years)  <b>OR</b> <b>M1</b> for using 20, 30, 40 and 50 as stem <b>A1</b> for ordered stem and leaf diagram <b>A1</b> for consistent key, e.g. $20   3 = 23$ (years) (NB: Condone use of comma between leafs)
<b>Total for Question: 3 marks</b>		



**M3.**

	Answer	Mark	Additional Guidance
(a)	$\begin{array}{r l} 2 & 378 \\ 3 & 1456 \\ 4 & 12455 \\ 5 & 023 \\ \hline 2 & 3 = 23 \end{array}$	3	<p><b>M1</b> for using 2, 3, 4 and 5 as stem  <b>A1</b> for ordered stem and leaf diagram  <b>A1</b> for consistent key, e.g. 2 3 = 23 (years)</p> <p><b>OR</b></p> <p><b>M1</b> for using 20, 30, 40 and 50 as stem  <b>A1</b> for ordered stem and leaf diagram  <b>A1</b> for consistent key, e.g. 20   3 = 23 (years)</p>
(b)	$\frac{8}{15}$	2	<p><b>B2</b> ft for <math>\frac{8}{15}</math> (ft from stem and leaf diagram)</p> <p>(<b>B1</b> for <math>\frac{8}{a}</math>, <math>a &gt; 8</math>, or <math>\frac{b}{15}</math>, <math>b &lt; 15</math>)            SC: <b>B1</b> for '8' : '15' or '8' out of '15'</p>
<b>Total for Question: 5 marks</b>			

**M4.**

	Working	Answer	Mark	Additional Guidance								
(a)		No time period Non-exhaustive response boxes Labels too vague	2	<b>B2</b> for TWO aspects from: "no time period", "response boxes not exhaustive (restricted range of responses)", "Labels on response boxes are too vague" ( <b>B1</b> for ONE aspect only)								
(b)	How many times did you go to the cinema last month?	Includes time period and proper response boxes	2	<p><b>B1</b> for inclusion of time period (this may be implied by the labels to the response boxes)</p> <p><b>B1</b> for at least 3 correctly labelled response boxes (non-overlapping)</p> <p>[NB: response boxes need not be exhaustive]</p>								
	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>0</td> <td>1-2</td> <td>3-5</td> <td>&gt; 5</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>				0	1-2	3-5	> 5				
	0				1-2	3-5	> 5					
<b>Total for Question: 4 marks</b>												

M5.

	Working				Answer	Mark	Additional Guidance
(a)	15	<b>25</b>	14	54	Table	3	<b>B3</b> for all 5 correct ( <b>B2</b> for 3 or 4 correct) ( <b>B1</b> for 1 or 2 correct)
	<b>22</b>	8	16	<b>46</b>			
	37	<b>33</b>	<b>30</b>	100			
(b)					$\frac{37}{100}$	1	<b>B1</b> $\frac{37}{100}$ oe

M6.

	Answer	Mark	Additional Guidance
(a)		2	<b>B1</b> 'What type of magazine do you read?' <b>B1</b> for at least 2 magazines identified in response boxes [Note: <b>B0</b> for any data collection sheet/chart
(b)	How many magazines have you read in the last week 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2-3 <input type="checkbox"/> >3 <input type="checkbox"/>	2	<b>B1</b> Relevant question that refers to a time period. <b>B1</b> for at least 3 mutually exclusive response boxes (need not be exhaustive)
<b>Total for Question: 4 marks</b>			

**M7.**

	Working				Answer	Mark	Additional Guidance
(a)	15	<b>25</b>	14	54	Table	3	<b>B3</b> for all 5 correct
	<b>22</b>	8	16	<b>46</b>			( <b>B2</b> for 3 or 4 correct)
	37	<b>33</b>	<b>30</b>	100			( <b>B1</b> for 1 or 2 correct)
(b)					$\frac{37}{100}$	1	<b>B1</b> $\frac{37}{100}$ oe
(c)					$\frac{24}{46}$	2	"'46'-'22'" <b>B2</b> for $\frac{\text{'46'}}{\text{'46'}}$ oe, ft from no of girls ( <b>B1</b> 16 + 8 or 24 or '46' seen)
<b>Total for Question: 6 marks</b>							

