

JustMaths

TWO WAY

TABLES

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Total Marks: Answers

Q.	Max	Actual	RAG
1	4		
2	3		
3	3		
4	3		
5	3		
6	3		
7	3		
8	4		
9	4		
10	6		
11	3		

$$\begin{array}{r} 18 \ 47 \\ +14 \ 32 \\ \hline 32 \ 15 \end{array}$$

$$\begin{array}{r} 21 \\ -15 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 23 \\ -19 \\ \hline 14 \end{array}$$

Q1. 80 Year 12 students each study one Science. The table shows some information about these students.

	Biology	Chemistry	Physics	Total
Female	18	15	14	47
Male	8	6	19	33
Total	26	21	33	80

$$\begin{array}{r} 19 \ 6 \ 33 \\ -25 \ 25 \ 8 \\ \hline \end{array}$$

$$\begin{array}{r} 80 \\ -47 \\ \hline 33 \end{array}$$

(a) Complete the table.

One of these students is picked at random.

(b) Write down the probability that the student is a girl who studies Physics.

$$\frac{14}{80} = \frac{7}{40}$$

(4 Marks)

Q2. Bob carried out a survey of 100 people who buy tea. He asked them about the tea they buy most. The two-way table gives some information about his results.

	Tea bags	Packet tea	Instant tea	Total
50 g	2	0	5	7
100 g	35	20	5	60
200 g	15	5	13	33
Total	52	25	23	100

Complete the two-way table.

(3 Marks)

Q3. 60 British students each visited one foreign country last week. The two-way table shows some information about these students.

	France	Germany	Spain	Total
Female	2	23	9	34
Male	15	2	9	26
Total	17	25	18	60

Complete the two-way table.

(3 Marks)

Q4. 80 students each study one of three languages. The two-way table shows some information about these students.

	French	German	Spanish	Total
Female	15	11	13	39
Male	16	17	8	41
Total	31	28	21	80

(a) Complete the two-way table.

One of these students is to be picked at random.

(b) Write down the probability that the student picked studies French.

$$\frac{31}{80}$$

(3 Marks)

Q5. Three rock bands played at a music festival. The names of the bands were The Rebels, ATC and Wand. 100 teenagers were asked which band they had enjoyed most. The two-way table gives information about their replies. Complete the two-way table.

	The Rebels	ATC	Wand	Total
Male	11	6	15	32
Female	22	18	28	68
Total	33	24	43	100

(3 Marks)

Q6. 200 adults were asked which one of English, Mathematics or Science they enjoyed most. The two-way table shows some information about their answers.

	English	Mathematics	Science	Total
Female	78	20	22	120
Male	20	22	38	80
Total	98	42	60	200

Complete the two-way table.

(3 Marks)

Q7.

	Boys	Girls	TOTAL
Liked coffee	6	8	14
Did not like coffee	4	12	16
TOTAL	10	20	30

This is important
↓

30 students were asked if they liked coffee. 20 of the students were girls. 6 boys liked coffee. 12 girls did **not** like coffee.

Use this information to complete the two way table.

(3 Marks)

Q8. Bob asked 100 adults which one type of music they enjoyed. They could choose Jazz or Rock or Classical or Folk music. The two-way table shows some information about their answers.

	Jazz	Rock	Classical	Folk	Total
Men	12	17	19	4	52
Women	9	23	9	7	48
Total	21	40	28	11	100

(a) Complete the two-way table.

(b) How many women did **not** choose Classical music?

$$9 + 23 + 7 = 39$$

(4 Marks)

Q9. 53 students attend an after school club and are able to choose from 3 activities: Football, Tennis or Running.

There are 24 boys.

22 students chose Football, of which 8 were girls.

8 boys chose tennis.

12 girls choose running.

	F	T	R	Total
Boys	14	8	2	24
Girls	8	9	12	29
Total	22	17	14	53

a) How many students chose running?

14

b) A student is chosen at random. What is the probability that a boy who chooses running is picked?

$\frac{2}{53}$

(4 Marks)

Q10. 100 students take part in lunchtime activities at a school. They can do either Art, Music or Drama.

31 students do Art of which 16 are girls.

25 students do Music of which 13 are girls.

There are 43 boys altogether.

You are always given a table ... so just draw your own 😊

a) Find the probability that a student chosen at random is a boy who attends Drama club.

	Art	Music	Drama	Total
Boys	15	12	16	43
Girls	16	13	28	57
Total	31	25	44	100

b) Find the probability that a student chosen at random is a girl who attends Drama club.

$$\frac{28}{100} = \frac{14}{50} = \frac{7}{25}$$

c) Write down the probability that a girl chosen at random attends Music club.

this is assuming its JUST girls = $\frac{13}{57}$

(6 Marks)

Q11.

Each child at a party can choose an ice cream. They can choose a flavour from vanilla, strawberry or chocolate. They can have their ice cream in a tub or in a cone. Jill wants to show how many tubs and how many cones she needs for each flavour of ice cream.

(a) Draw a two-way table Jill could use to show this information.

	Vanilla	Strawberry	Chocolate	Total
Tub			8	
Cone				
Total				

Obviously you'll use a ruler 😊

Eight children choose chocolate ice cream in a tub.

(b) Write the number 8 in the correct place in your two-way table.

(3 Marks)