

Name:

Date:

Two-Way Tables

GCSE

Edexcel
Mathematics
Grade (9-1)

Mark

Score (%)

— 80

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Materials

For this paper you must have:

- Ruler
- Pencil, Rubber, Protractor and Compass
- Scientific calculator, which you are expected to use when appropriate

Instructions

- Answer all questions
- Answer questions in the space provided
- All working must be shown
- Do all rough work in this book. Cross out any rough work you don't want to be marked

Information

- The marks for the questions are shown in brackets

1 The table gives information about the number of cappuccinos, latte and mocha ordered in a café on a weekend.

	Cappuccino	Latte	Mocha	Total
Saturday	10		45	
Sunday		42		120
Total	50	100		

(a) Complete the two-way table.

(3)

A person is chosen at random.

(b) What is the probability that she ordered a mocha?

.....

(1)

(Total for question 1 is 4 marks)

2 The table shows the favorite sports of students in grade 9 and 10.

	Hockey	Cricket	Baseball	Total
Grade 9	12		14	
Grade 10		12		
Total	40		32	112

(a) Complete the two-way table.

(3)

A student was chosen at random.

(b) What is the probability that the student is from grade 10 and likes cricket?

.....

(2)

(Total for question 2 is 5 marks)

3 Students in grade 10 participated in a poll to choose their class's mascot for sports day. The table below shows the results of the poll.

	Lion	Dragon	Eagle	Total
Boys		23		60
Girls	18		2	
Total	30	63		120

(a) Complete the two-way table.

(3)

A student is chosen at random.

(b) What is the probability that the student was a girl and voted dragon.

.....

(2)

(Total for question 3 is 5 marks)

4 The table shows the favorite subjects of students in Grade 5.

	Mathematics	Science	English	Total
Girls	32		20	64
Boys		10		
Total	52		55	129

(a) Complete the two-way table.

(3)

A student was chosen at random.

(b) What is the probability that the student is a girl who likes science?

.....

(2)

(Total for question 4 is 5 marks)

5 The table below shows the means of transport to school used by boys and girls in a school.

	Walking	Cycling	Car/Bus	Total
Boys		34		130
Girls	58		32	130
Total		74	78	

(a) Complete the two-way table.

(3)

(b) What is the probability that a student chosen at random walks to school?

.....
(1)

(Total for question 5 is 4 marks)

6 The table below shows the destinations of people on a bus stop who boarded a bus on Monday and Tuesday.

	A town	Bee town	Sea town	Total
Monday	124	154		356
Tuesday			86	294
Total	232		164	

(a) Complete the two-way table.

(3)

A person is chosen at random.

(b) What is the probability that the person boarded on Monday?

.....
(1)

(Total for question 6 is 5 marks)

7 Amna records the favorite music genre of people in her music class.

There are 133 students in her class, of which 69 are boys.

11 of the 23 people who like Classical music are girls.

14 girls like Jazz.

34 boys and 39 girls like Pop music.

Complete the two-way table.

	Classical	Jazz	Pop	Total
Boys			34	69
Girls	11	14	39	
Total	23			133

(Total for question 7 is 4 marks)

8 Kevin records the favorite deserts of people in his class.

There are 46 boys in the class.

11 of the 52 girls like cake.

Of the 40 students who like ice-cream, 6 are boys.

Of the 26 students who like pudding, 19 are boys.

Complete the two-way table.

	Cake	Pudding	Ice-cream	Total
Boys				
Girls				
Total				

(Total for question 8 is 4 marks)

- 9 140 students from Grade 12 and Grade 13 are studying in an academy. All of the students study either Biology, Chemistry or Physics.

There are 87 students from Grade 13, of which 22 take Chemistry.
 21 of the 53 students taking Biology are from Grade 12.
 10 of the 43 students taking Physics are from Grade 12.

Complete the two-way table.

	Biology	Chemistry	Physics	Total
Grade 12				
Grade 13				
Total				

(Total for question 9 is 4 marks)

- 10 A sandwich shop allows customers to choose between French Dressing, Thousand Island Sauce and BBQ sauce as an extra dressing.

A total of 511 people buy tikka sandwiches and 812 people buy fajita sandwiches.
 198 people who bought fajita sandwiches chose Thousand Island.
 202 of the 514 people who chose French dressing bought a fajita sandwich.
 156 people chose to put BBQ sauce in their tikka sandwiches.

Complete the two-way table.

	French Dressing	Thousand Island	Bbq sauce	Total
Tikka				
Fajita				
Total				

(Total for question 10 is 4 marks)

11 215 students from Grade 9 and Grade 10 are taking after-school classes. All of the students study either English, Music or Art.

There are 110 students from Grade 10, of which 71 take Music classes.
 5 students from Grade 10 take English Language classes.
 Of the 67 students taking Art classes, 41 are from Grade 9.
 32 students from Grade 9 take Music classes.

Complete the two-way table.

	English Language	Music	Art	Total
Grade 9				
Grade 10				
Total				

(Total for question 11 is 4 marks)

12 A survey is carried out to find the favorite snacks of the 276 people in a park.

Of the 80 people who like ice-cream, 56 are children.
 70 adults like pizza.
 64 of the 96 people who like fries are children

Complete the two-way table.

	Ice-cream	Pizza	Fries	Total
Children				
Adults				
Total				

(Total for question 12 is 4 marks)

13 2 different clubs, the paragliding club and the skiing club participated in an event. Some of the participants from each club were organizers while others were attendees.

22% of the participants were organizers.

60% of the participants were from the paragliding club.

32% of the participants were attendees from skiing club.

What percentage of the participants of the event were organizers from skiing club?

.....
(Total for question 13 is 4 marks)



14 Students studying chemical engineering are allowed to choose one elective in their junior and senior year.

They can choose from the following:

I: Fuel and Energy

II: Food Preservation

III: Polymer Science

243 of the 567 juniors chose I.

178 seniors chose I while 214 seniors chose II.

Of the 461 students who chose III, 170 were juniors.

There are a total of 1250 students in junior and senior year.

How many students chose II?

.....
(Total for question 14 is 4 marks)

15 100 students in grade 10 either study Korean or Chinese or Urdu.
45 of the students are girls while the rest are boys.
12 girls study Chinese. 15 girls and 17 boys study Korean.
A total of 30 students study Urdu.
Work out how many boys study Urdu.

.....
(Total for question 15 is 4 marks)



16 300 boys and girls are asked to choose between vanilla and chocolate ice-cream.

58% of the students like vanilla.

45% of the students are girls.

21% of the students are girls who like chocolate.

Work out how many boys like vanilla ice-cream.

.....
(Total for question 16 is 5 marks)

