

Skill

Group A - Row and column totals

Work out the row and column totals:

1	١
4	•

	Туре А	Type B	Total
Group 1	5	3	
Group 2	2	6	
Total			

3)

	Туре А	Type B	Total
Group 1	9	3	
Group 2	2	6	
Total			

5)

	Туре А	Туре В	Total
Group 1	6	7	
Group 2	3	5	
Total			

7)

	Туре А	Туре В	Total
Group 1	2	8	
Group 2	6	9	
Total			

9)

	Туре А	Туре В	Total
Group 1	8	8	
Group 2	6	9	
Total			

2)			
	Туре А	Туре В	Total
Group 1	7	3	
Group 2	2	6	
Total			

4)

	Туре А	Туре В	Total
Group 1	4	7	
Group 2	3	5	
Total			

6)

	Туре А	Туре В	Total
Group 1	9	7	
Group 2	3	5	
Total			

8)

	Туре А	Туре В	Total
Group 1	5	8	
Group 2	6	9	
Total			

10)

	Туре А	Туре В	Total
Group 1	5	10	
Group 2	7	12	
Total			



11)

	Туре А	Туре В	Total
Group 1	8	10	
Group 2	7	12	
Total			

Туре А

12)

	Type A	Type B	Total
Group 1	10	10	
Group 2	7	12	
Total			

Group B - Missing values

Work out the missing values:

1)			
	Туре А	Туре В	Total
Group 1	2		7
Group 2			
Total	4		10

	Туре А	Туре В	Total
Group 1	2		6
Group 2			
Total	4		10

3)

	Туре А	Туре В	Total
Group 1	2		6
Group 2			
Total	5		10

5)

	Туре А	Туре В	Total
Group 1	4		8
Group 2			
Total	10		20

7)

	Туре А	Туре В	Total
Group 1			
Group 2		10	14
Total	15		30

4)

2)

	Туре А	Туре В	Total
Group 1	4		8
Group 2			
Total	7		20

6)

	Туре А	Туре В	Total
Group 1	4		12
Group 2			
Total	10		20

8)

	Туре А	Туре В	Total
Group 1			
Group 2		10	16
Total	15		30

thirdspacelearning.com Helping schools close the maths attainment gap through targeted one to one teaching and flexible resources



	Туре А	Туре В	Total
Group 1			
Group 2		10	16
Total	17		30

11)

	Туре А	Туре В	Total
Group 1		9	
Group 2			22
Total		20	40

10)

	Туре А	Туре В	Total
Group 1		8	
Group 2			22
Total		20	40

12)

	Туре А	Туре В	Total
Group 1		9	
Group 2			22
Total		24	40

Group C - 2 by 3 table

Work out the missing values:

1)

	Туре А	Туре В	Total
Group 1	2	5	
Group 2	3	4	
Group 3	6	1	
Total			

3)

	Туре А	Туре В	Total
Group 1	7	5	
Group 2	9	3	
Group 3	6	2	
Total			

5)

	Туре А	Туре В	Total
Group 1		5	
Group 2			10
Group 3	4		10
Total	10		30

2)

	Type A	Туре В	Total
Group 1	7	5	
Group 2	3	4	
Group 3	6	2	
Total			

4)

	Type A	Type B	Total
Group 1		5	
Group 2			10
Group 3	4		10
Total	10		30

6)

	Туре А	Туре В	Total
Group 1		7	
Group 2			10
Group 3	6		10
Total	10		30



7)

	Type A	Type B	Total
Group 1			15
Group 2		11	
Group 3	12		20
Total		25	50

8)

	Туре А	Type B	Total
Group 1			15
Group 2		11	
Group 3	14		20
Total		25	50

9)

	Туре А	Туре В	Total
Group 1			15
Group 2		11	
Group 3	14		20
Total		20	50

10)

	Туре А	Туре В	Total
Group 1			25
Group 2	18		30
Group 3		21	
Total	45		80

11)

	Туре А	Туре В	Total
Group 1			25
Group 2	18		30
Group 3		21	
Total	45		90

12)

	Туре А	Туре В	Total
Group 1			25
Group 2	18		30
Group 3		21	
Total	45		100



Applied

1) (a) There are 60 students in 2 classes. There are 31 students in Class 1. The students are asked to choose between food and textiles. 44 students choose food.
 17 students in Class 2 choose food.

Complete the two way table:

	Textiles	Food	Total
Class 1			
Class 2			
Total			

- (b) How many students in Class 1 chose textiles?
- 2) (a) There are 80 people. There are 35 children and the others are adults.
 58 of the people are right-handed.
 6 of the adults are left-handed.

Complete the two way table:

	Adult	Child	Total
Right			
Left			
Total			

(b) How many children are right-handed?



3) (a) At a campsite there are people with different nationalities.People are either staying in a caravan or a tent.

Complete the two way table:

	Caravan	Tent	Total
British			70
French	6		20
German		23	
Total	45		120

- (b) How many British people are staying in a tent?
- (c) A person is selected at random. What is the probability that they are German and are staying in a caravan?
- 4) (a) 150 test papers were taken in Biology, Chemistry and Physics. The test papers are marked as pass or fail.

Complete the two way table:

	Pass	Fail	Total
Biology	42		53
Chemistry			
Physics		18	47
Total	110		150

- (b) How many test papers passed Physics?
- (c) A paper is selected at random. What is the probability that the paper selected in a Biology paper fails?



Two way tables - Exam Questions

Complete the table: 1)

	Blue Eyes	Brown Eyes	Green Eyes	Total
Class 1	4		7	
Class 2				31
Total	16		18	63

. (3 marks)

2) **(a)** There are 80 customers in a restaurant.

The restaurant serves pasta or pizza.

There are 55 adults and the rest are children. 38 customers choose pizza. 18 children choose pasta.

Complete the two way table:

	Adult	Child	Total
Pasta			
Pizza			
Total			

(3)

(b) A customer is selected at random.

> What is the probability that the customer selected is a child who chose pizza?

. (2) (5 marks)

7



Two way tables - Exam Questions

3) (a) There are 180 passengers on a flight. There are 120 adults and the rest are children. 40 passengers were First class. 30 of the adults had a Business ticket. 38 of the children had an Economy ticket and 3 had a First class ticket.

Complete the two way table:

	Adult	Child	Total
First			
Business			
Economy			
Total			

(3)

(1)

- (b) How many adults had a First class ticket?
- (c) A passenger is selected at random.

What is the probability that they are an adult travelling with an Economy ticket?

(2) (6 marks)

.



	Question							Answer			
	Sk	ill Que	stions								
iroup A N		ork out	the row	anc	d columi		1)				
			Type A		Type B	Total			Type A	Type B	To
	C	Group 1	5		3			Group 1	5	3	8
	C	Group 2	2		6			Group 2	2	6	8
		Total						Total	7	9	1
	2)							2)			
			Туре	A	Type B	Total			Type A	Type B	То
		Group 1			3			Group 1	7	3	1
	1	Group 2			6			Group 2	2	6	8
		Total						Total	9	9	1
		Group -						Group I	5	5	
		Group 1	Type	Α	Type B 3	Total		Group 1	Type A 9	Type B 3	To 1
		Group 2	2 2		6			Group 2	2	6	3
		Group 2 Total	2								8
	4)		2 2					Group 2	2	6	٤
	4)		2 7 7 7 7 9			Total		Group 2 Total	2	6	
	4)		Туре		6	Total		Group 2 Total 4) Group 1	2 11 Туре А 4	6 9 Type B 7	2 2 To 1
	4)	Total	Type		6 Type B	Total		Group 2 Total 4) Group 1 Group 2	2 11 Туре А 4 3	6 9 Type B 7 5	۲۰ ۲۰ ۲۰
	4)	Total Group 1	Type		6 Туре В 7	Total		Group 2 Total 4) Group 1	2 11 Туре А 4	6 9 Type B 7	۲۰ ۲۰ ۲۰
		Total Group 1 Group 2	Type		6 Туре В 7	Total		Group 2 Total 4) Group 1 Group 2	2 11 Туре А 4 3	6 9 Type B 7 5	ε 2 Το 1 ε
	4) 5)	Total Group 1 Group 2	Type 4 2 3	A	6 Type B 7 5			Group 2 Total 4) Group 1 Group 2 Total	2 11 Туре А 4 3	6 9 Type B 7 5	۶ 2 70 1 5 1
		Total Group 1 Group 2	Туре 4 2 3	A	6 Туре В 7	Total		Group 2 Total 4) Group 1 Group 2 Total	2 11 Туре А 4 3 7	6 9 Type B 7 5 12	٤ 2 7 0 1 1 ٤ 1
		Total Group 1 Group 2 Total	Type 1 4 2 3 7 7 7 9 6	A	6 Type B 7 5 Type B			Group 2 Total 4) Group 1 Group 2 Total 5)	2 11 Type A 4 3 7 7	6 9 7 5 12 Type B	۲۰ ۲۰ ۲۰ ۲۰ ۲۰ ۲۰ ۲۰
		Total Group 1 Group 2 Total Group 1	Type 1 4 2 3 7 7 7 9 6	A	6 Type B 7 5 Type B 7			Group 2 Total 4) Group 1 Group 2 Total 5) Group 1	2 11 Туре А 4 3 7 7 Туре А 6	6 9 7 5 12 7 7 7 7 7	۲۰ ۲۰ ۲۰ ۲۰ ۲۰ ۲۰ ۲۰ ۲۰ ۲۰ ۲۰
		Total Group 1 Group 2 Total Group 1 Group 2	Type 1 4 2 3 7 7 7 9 6	A	6 Type B 7 5 Type B 7			Group 2 Total 4) Group 1 Group 2 Total 5) Group 1 Group 1 Group 2	2 11 Type A 4 3 7 7 Type A 6 3	6 9 7 5 12 7 12	۲۰ ۲۰ ۲۰ ۲۰ ۲۰ ۲۰ ۲۰ ۲۰ ۲۰ ۲۰
	5)	Total Group 1 Group 2 Total Group 1 Group 2	Type 4 2 3 7 4 2 3 7 7 7 9 6 2 3	A A	6 Type B 7 5 7 7 5 7 5 7 5			Group 2 Total 4) Group 1 Group 2 Total 5) Group 1 Group 1 Group 2 Total	2 11 Type A 4 3 7 7 Type A 6 3	6 9 7 5 12 7 12	۲۰ ۲۰ ۲۰ ۲۰ ۲۰ ۲۰ ۲۰ ۲۰ ۲۰ ۲۰
	5)	Total Group 1 Group 2 Total Group 1 Group 2	Type 1 4 2 3 1 7 2 3 1 6 2 3 1 6 2 3	A A A	6 Type B 7 5 Type B 7	Total		Group 2 Total 4) Group 1 Group 2 Total 5) Group 1 Group 1 Group 2 Total	2 11 Түре А 4 3 7 7 Туре А 6 3 9	6 9 7 5 12 Type B 7 5 12 7 5 12	ε 2 Το 1 ε 1 ε 1 ε 1 το 1 το το το
	5)	Total Group 1 Group 2 Total Group 2 Total	Type 4 3 7	A A A	6 7 7 5 7 5 7 5 7 5 7 5	Total		Group 2 Total 4) Group 1 Group 2 Total 5) Group 1 Group 2 Total 6)	2 11 Туре А 4 3 7 7 Туре А 6 3 9 9	6 9 7 5 12 7 12 7 5 12 7 5 12	٤ 2



Group A	7)					7)			
contd	ſ		Type A	Type B	Total		Type A	Туре В	Total
		Group 1	2	8		Group 1	2	8	10
		Group 2	6	9		Group 2	6	9	15
		Total				Total	8	17	25
	8)					8)			
			Type A	Type B	Total		Туре А	Туре В	Total
		Group 1	5	8		Group 1	5	8	13
		Group 2	6	9		Group 2	6	9	15
		Total				Total	11	17	28
	9)					9)			
			Type A	Type B	Total		Type A	Туре В	Total
		Group 1	8	8		Group 1	8	8	16
		Group 2	6	9		Group 2	6	9	15
		Total				Total	14	17	31
	10)		_			10)			
			Type A	Type B	Total		Type A	Туре В	Total
		Group 1	5	10		Group 1	5	10	15
		Group 2	7	12		Group 2	7	12	19
		Total				Total	12	22	34
	11)					11)			
			Type A	Type B	Total		Type A	Туре В	Total
		Group 1	8	10		Group 1	8	10	18
		Group 2	7	12		Group 2	7	12	19
		Total				Total	15	22	37
	12)					12)			
			Type A	Type B	Total		Type A	Type B	Total
1 1		Group 1	10	10		Group 1	10	10	20
		croab 1							
		Group 2	7	12		Group 2	7	12	19



Group B	Wo	rk out the	e missing	values:						
	1)					1)				
	ĺ		Туре А	Туре В	Total			Туре А	Type B	Total
		Group 1	2		7		Group 1	2	5	7
		Group 2					Group 2	2	1	3
	[Total	4		10		Total	4	6	10
	2)					2)				
			Туре А	Туре В	Total			Туре А	Туре В	Total
		Group 1	2		6		Group 1	2	4	6
		Group 2					Group 2	2	2	4
	l	Total	4		10		Total	4	6	10
	3)					3)				
			Type A	Туре В	Total			Type A	Type B	Total
		Group 1	2		6		Group 1	2	4	6
		Group 2					Group 2	3	1	4
		Total	5		10		Total	5	5	10
	4)					4)				
			Type A	Туре В	Total			Туре А	Туре В	Total
		Group 1	4		8		Group 1	4	4	8
		Group 2					Group 2	3	9	12
		Total	7		20		Total	7	13	20
	5)					5)				
	ſ									
			Туре А	Туре В	Total			Type A	Туре В	Total
		Group 1	Type A 4	Туре В	Total 8		Group 1	Iype A 4	Type B 4	Total 8
		Group 1 Group 2		Туре В			Group 1 Group 2			
				Туре В				4	4	8
		Group 2	4	Туре В	8		Group 2	4 6	4 6	8 12
	6)	Group 2	4	Iype B	8		Group 2	4 6	4 6	8 12
	6)	Group 2	4	Туре В	8		Group 2	4 6	4 6	8 12
	6)	Group 2	4		8	6)	Group 2	4 6 10	4 6 10	8 12 20
	6)	Group 2 Total	4 10 Туре А		8 20 Total	6)	Group 2 Total	4 6 10 Туре А	4 6 10 Type B	8 12 20 Total
	6)	Group 2 Total Group 1	4 10 Туре А		8 20 Total	6)	Group 2 Total Group 1	4 6 10 Туре А 4	4 6 10 Type B 8	8 12 20 Total 12



Group B	7)					7)			
contd	Í		Туре А	Type B	Total		Type A	Туре В	Total
		Group 1				Group 1	11	5	16
		Group 2		10	14	Group 2	4	10	14
	[Total	15		30	Total	15	15	30
	8)					8)			
			Type A	Туре В	Total		Type A	Туре В	Total
		Group 1				Group 1	9	5	14
		Group 2		10	16	Group 2	6	10	16
	(Total	15		30	Total	15	15	30
	9)					9)			
			Туре А	Type B	Total		Туре А	Туре В	Total
		Group 1				Group 1	11	3	14
		Group 2		10	16	Group 2	6	10	16
		Total	17		30	Total	17	13	30
	10)					10)			
			Type A	Type B	Total		Type A	Туре В	Total
		Group 1		8		Group 1	10	8	18
		Group 2			22	Group 2	10	12	22
	(Total		20	40	Total	20	20	40
	11)					11)			
			Type A	Type B	Total		Type A	Туре В	Total
		Group 1		9		Group 1	9	9	18
		Group 2			22	Group 2	11	11	22
		Total		20	40	Total	20	20	40
	12)					12)			
			Туре А	Type B	Total		Туре А	Туре В	Total
		Group 1		9		Group 1	9	9	18
		Group 2			22	Group 2	7	15	22
		Total		24	40	Total	16	24	40







iroup C	6)						6)					
ontd			Type A	Type B	Total			Type A	Type B	Total		
		Group 1		7			Group 1	3	7	10		
		Group 2			10		Group 2	1	9	10		
		Group 3	6		10		Group 3	6	4	10		
		Total	10		30		Total	10	20	30		
	7)						7)					
			Type A	Type B	Total			Type A	Type B	Total		
		Group 1			15		Group 1	9	6	15		
		Group 2		11			Group 2	4	11	15		
		Group 3	12		20		Group 3	12	8	20		
		Total		25	50		Total	25	25	50		
	8)		Туре А	Type B	Total		8)	Туре А	Type B	Total		
			Type A	Type B			<u> </u>					
		Group 1		11	15		Group 1	7	8	15 15		
		Group 2	14	11	20		Group 2 Group 3	14	11 6	20		
		Group 3 Total	14	25	20 50		Total	25	25	50		
		Totat		25	50		lotat	23	23			
	9)					9	9)					
			Type A	Type B	Total			Type A	Type B	Total		
		Group 1			15		Group 1	12	3	15		
		Group 2		11			Group 2	4	11	15		
		Group 3	14		20		Group 3	14	6	20		
		Total		20	50		Total	30	20	50		
	10)						10)					
	1 (Type A	Type B	Total			Type A	Type B	Total		
							Curry 1	23	2			
		Group 1			25		Group 1		2	25		
		Group 1 Group 2	18		25 30		Group 1 Group 2	18	12	25 30		
			18	21								



Group C	11)							11)						
			Туре А	Туре В	Total				Туре А	Type B	Total			
		Group 1			25			Group 1	13	12	25			
		Group 2	18		30			Group 2	18	12	30			
		Group 3		21				Group 3	14	21	35			
		Total	45		90]		Total	45	45	90			
	12)							12)						
			Type A	Type B	Total				Type A	Type B	Total			
		Group 1			25			Group 1	3	22	25			
		Group 2	18		30			Group 2	18	12	30			
		Group 3		21				Group 3	24	21	45			
		Total	45		100]		Total	45	55	100			



	Qu	lestion				Ar	iswer			
	Ар	plied Questi	ons							
1)	a)	There are 6 are 31 study The student food and te 44 students 17 students	ents in Clas ts are aske xtiles. s choose fo s in Class 2	ss 1. d to choose od. choose foo	a)	Class 1 Class 2 Total	Textiles41216	Food 27 17 44	Total 31 29 60	
		Complete t	he two way	y table:						
			Textiles	Food	Total					
		Class 1								
		Class 2								
		Total								
	b)	How many textiles?	students ir	n Class 1 cł	nose	b)	4 studen	ts		
2)	a)	There are 8	0 people. T	here are 3	5 children	a)		Adult	Child	Total
'		and the oth					Right	36	29	65
		65 of the pe	eople are ri	ght-hande	d.		Left	9	6	15
		9 of the adu	ults are left	-handed.			Total	45	35	80
		Complete t	he two way	y table:						
			Adult	Child	Total					
		Right								
		Left								
		Total								
	b)	How many	children ar	e right-han	ided?	b)	29 childre	en		



21	a)	At a campa	ito thora a	ro pooplos	with	a)			-	
3)	^a)	At a camps			VILII	^a)	Duiti-L	Caravan	Tent	Total
		different na	itionalities.				British	32	38	70
							French German	6 7	14 23	20 30
		People are	either stay	ring in a ca	ravan or a		Total	45	23 75	120
		tent.					Iotat	40	,,,	120
		Complete t	he two wa	y table:						
			Caravan	Tent	Total					
		British			70					
		French	6		20					
		German		23						
		Total	45		120					
	b)	How many tent?	British peo	ople are st	aying in a	b)	38			
	c)	A person is	selected a	at random.	What is	c)	7			
	ľ	the probabi				´	120			
		•								
		are staying	in a carava	an <i>:</i>						
4)	a)	150 test pa	pers were	taken in B	iology.	a)		Pass	Fail	Total
''	'	Chemistry a	•		J <i>I</i>	´	Biology	42	11	53
		The test pa			ass or fail		Chemistry	39	11	50
		ine test pa	pers are m	iai keu as þ	ass of Idit.		Physics	29	18	47
		C					Total	110	40	150
		Complete t	ne two wa	у таріе:						
			Pass	Fail	Total					
		Biology	42		53					
		Chemistry								
		Physics		18	47					
		Total	110		150					
	b)	How many	test paper	s passed F	hysics?	b)	29			
	C)				What is the	c)	11			
		probability		aper select	ed in a		150			
		Biology pap	per tails?							



Two way tables - Mark Scheme

	Ques	Question										
	Exam	Questi	ons									
1)	Comple	Complete the table:						Blue Eyes	Brown Eyes	Green Eyes	Total	ו
							Class 1	(4)	21	(7)	32]
		Blue Eyes	Brown Eyes	Green Eyes	Total		Class 2	12	8	11	(31)	
	Class 1	4		7			Total	(16)	29	(18)	(63)	J
	Class 2	10		18	31 63							
	Total	16		19	03				et numbe			(1)
									ect numbe	ers		(1)
		for fully correct table									(1)	
2) (a) There a	There are 80 customers in a						Adı	ılt (Child	Total	ו
	restaura	restaurant.					Pasta			18		1
							Pizza				38	1
	The res	taurant	serves p	oasta or	pizza.		Total	55	;		80	(1)
	There a	There are 55 adults and the rest are						Adı	ilt (Child	Total	
	children	1.					Pasta	24	•	18	42	
							Pizza	31		7	38	1
	38 cust	omers c	hoose p	izza.			Total	55	;	25	80	J
						for between 5 and 8 entries correct						
	18 chile	dren ch	oose pas	sta.		for fully correct table						
	Comple	te the t	wo way	table:								(1)
	Compic			Child	Total							
	Pasta	Aut			Totat							
	Pizza											
	Total											
(h	A custo	mer is s	selected	ected at random.			7 or 150	seen				(1)
ربد ا	What is					ĺ	7	~~~				
	custom	-	-			-	150					(1)
	chose p				-							



3)	(a)	There are	180 pass	sengers of	n a flight.	(a)		Adult	Child	Total	
							First		3	40	
		There are	120 adu	lts and the	e rest are		Business	30			
		children.					Economy		38		
							Total	120		180	(1)
		40 passer	ngers wer	e First cla	ISS.			Adult	Child	Total	
		30 of the	adulte ha	d a Rusin	ACC		First	37	3	40	
		ticket.					Business	30	19	49	
							Economy	53	38	91	
		38 of the	children	had an Ec	conomy		Total	120	60	180	
		ticket and 3 had a First class ticket. Complete the two way table:				for fully correct table					
			Adult	Child	Total						
		First									
		Business									
		Total									
	(b)	How man ticket?	y adults l	nad a Firs	t class	(b)	37				(1)
	(c)	c) A passenger is selected at random. What is the probability that they are an adult travelling with an Economy					53 or 180 s $\frac{53}{100}$	seen			(1) (1)
		ticket?	avening	with all E	conomy		180				

Do you have KS4 students who need additional support in maths?

Our specialist tutors will help them develop the skills they need to succeed at GCSE in weekly one to one online revision lessons. Trusted by secondary schools across the UK.

Visit thirdspacelearning.com to find out more.

