

# Two Way Tables

Video 319 on [www.corbettmaths.com](http://www.corbettmaths.com)

Examples

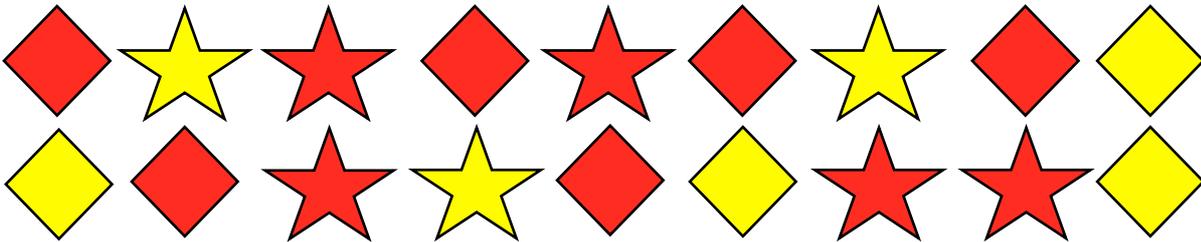


Workout

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Question 1: Complete the two way table to show the information about the shapes below.



	Rhombus	Star	Total
Red			
Yellow			
Total			

Question 2: 50 children were asked if they wanted to go bowling or to the cinema.

17 girls and 11 boys wanted to go bowling.  
12 boys wanted to go to the cinema.

(a) Use this information to complete the two-way table below.

	Bowling	Cinema	Total
Boys			
Girls			
Total			

(b) How many children, in total, want to go to the cinema?

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Question 3: Complete the following two way tables:

(a)

	Car	Bus	Walk	Total
Year 9	10	8		24
Year 10		7	5	
Total	16			42

(b)

	English	Art	Total
Pass	25		
Fail		12	13
Total		19	

(c)

	Rugby	Football	Hockey	Total
Class 9A	7		6	24
Class 9B		3		
Total	12			40

(d)

	Child	Adult	Total
Male	52		86
Female		43	
Total			178

Question 4: This two-way table shows information about the students in years 8, 9 and 10.

	Year 8	Year 9	Year 10
Boys	45	38	51
Girls	32	52	28

- Find the total number of students in year 8.
- Find the total number of girls in years 8, 9 and 10.
- What fraction of the students are in year 10?
- What fraction of year 9 students are girls?

Question 5: This two-way table shows the number of goals scored in each match by three football teams throughout January, February and March.

	Rovers	City	United
0 goals	8	3	5
1 goal	3	8	9
2 or more	7	9	4

- Find the number of matches that Rovers played.
- Find the number of matches where 1 goal was scored by these teams.
- In what percentage of their matches did City score no goals?
- Find the fraction of United's matches where they scored 1 or more goals.

### Apply

Question 1: Paul has a deck of 50 cards, each with a shape on it.  
The shapes are either red or black.

	Square	Rectangle	Kite
Red	17	6	1
Black	4	9	13

Paul picks a card at random.

- (a) What is the probability that the card has a black kite on it?
- (b) What is the probability that the card has a red shape on it?
- (c) What is the probability that the card has a square on it?
- (d) What is the probability that the card has a shape with at least 2 lines of symmetry?

Question 2: 60 people visited a swimming pool one evening.  
13 out of the 19 people who wore goggles were adults.  
There were 15 children.

- (a) Complete a two-way table for this information.
- (b) How many adults did not wear goggles?
- (c) What fraction of the children wore goggles?

Question 3: 100 families booked a holiday in July or in August, at a travel agents.  
Some of the families booked to go to France.  
Some booked to go to Spain.  
The rest of the families booked a holiday to Portugal.

59 families booked to go on holiday in August.  
19 of the 35 families going to France booked to go in July.  
30 families booked to go to Portugal.  
20 families booked to go to Spain in August.

- (a) Create a two-way table for this information.
- (b) How many families booked to go to Portugal in July?

Question 4: There are 120 students in Year 11 at a school.  
Each student studies one language, either French, Spanish, German or Welsh.  
21 of the 40 students studying Welsh are male.  
18 males and 9 females study French.  
12 of the 17 students studying Spanish are female.  
Twice as many females study German than males.

How many students in Year 11 are female?

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Question 5: A teacher surveys 64 children on how they travelled to school.  
 20 of the students were in Year 7.  
 The teacher surveyed 30% more students in Year 9 than in Year 7.  
 The rest of the students surveyed were in Year 11.  
 75% of the students in Year 7 walked to school.  
 8 more students in Year 9 walked to school than did not walk.  
 Out of students surveyed, more Year 11 students walked to school than Year 9 students.

One of these students is picked at random

Write down the probability that the student chosen will walk to school.

Question 6: Isla has a box of counters.  
 The table shows information about the shape and colours of the counters.

		Shape		
		Circle	Triangle	Square
Colour	Blue	6	2	5
	Red	8	9	11

Isla picks a counter at random, looked at it and then returned it to the box.

(a) Given it is a circular counter, what is the probability that it was red?

David picks a counter at random, looked at it and then returned it to the box.

(b) Given it is a blue counter, what is the probability that it was triangular?

Emily adds a number of red square counters to the box.

The probability of Emily picking a red square at random is now  $\frac{2}{3}$

(c) How many red square counters did Emily add to the box?

Answers



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