WALT read information collected from data and surveys represented in two way tables

SUCCESS CRITERIA

- Identify the two variables being represented in the table.
- Understand the meaning of the frequencies or percentages in each cell of the table.
- Calculate the relative frequency or percentage for each cell of the table.
- Interpret the data in the table to answer questions about the relationship between the two variables.
- Identify trends or patterns in the data.
- Make predictions based on the data in the table.
- [Reading Two way tables](#)

● EXAMPLE 1

The table shows the data collected from a survey of a Year 8 class.

	Left-handed	Right-handed	
Male	2	14	16
Female	1	13	14
	3	27	30

Use the table to find the number of students who are:

a in the class
b male
c female
d left-handed
e right-handed
f male and left-handed
g female and right-handed
h male or right-handed or both
i male or right-handed but not both
j neither male nor right-handed
k right-handed but not male
l left-handed but not female.

a 30 students in the class
b 16 male students
c 14 female students
d 3 left-handed students
e 27 right-handed students
f 2 male and left-handed students
g 13 female and right-handed students
h 29 male or right-handed students or both
i 15 male or right-handed students but not both
j 1 neither male nor right-handed student
k 13 right-handed but not male students
l 2 left-handed but not female students

Exercise 12H

1 The information in the table was collected from a group of athletes.

Use the table to find the number of people who are:

	Heavy	Light	
Tall	8	9	17
Short	3	10	13
	11	19	30

a in the group of athletes

b tall

c short

d heavy   **e** light

f short and light   **g** short and heavy

h tall and light   **i** tall and heavy

j tall or light or both   **k** tall or light but not both

l short or heavy or both   **m** short or heavy but not both

n neither short nor heavy   **o** neither tall nor light

p heavy but not short   **q** light but not tall.

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2 The table shows the results of a survey of a group of students.

	Born in Australia	Born overseas	
Male	87	29	116
Female	98	16	114
	185	45	230

Use the table to find how many students were:

a surveyed   **b** male

c female   **d** born in Australia

e born overseas   **f** male and born overseas

g female and born in Australia   **h** male or born overseas or both

i male or born overseas but not both   **j** neither male nor born overseas

k neither female nor born in Australia   **l** born in Australia but not male

m female but not born in Australia.

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3 The table shows data collected from a group of students. How many students have:

	Black hair	Not black hair	
Brown eyes	11	6	17
Not brown eyes	5	8	13
	16	14	30

a black hair?

b brown eyes?

c black hair and brown eyes?

d black hair or brown eyes or both?

e black hair or brown eyes but not both?   **f** neither black hair nor brown eyes?

g black hair but not brown eyes?   **h** brown eyes but not black hair?

4 The table shows the results of a survey of the way a group of employees get to work each day.

   a Complete the table by finding the missing numbers.

	Bus	Not bus	
Train	8	v	11
Not train	y	5	z
	x	w	23

   b How many employees travel by:

     i bus?   **ii** train?

    iii bus and train?   **iv** bus or train or both?

     v bus or train but not both?   **vi** neither bus nor train?

    vii bus but not train?   **viii** train but not bus?

5 The table shows data collected from a group of students.

	Passed Mathematics	Did not pass Mathematics	
Passed English	k	3	m
Did not pass English	l	n	6
	31	p	36

   a Complete the table by finding the missing numbers.

   b How many students:

     i passed Mathematics?   **ii** passed English?

    iii passed Mathematics and English?   **iv** passed Mathematics or English or both?

     v passed Mathematics or English but not both?   **vi** failed both subjects?

    vii passed Mathematics but not English?   **viii** passed English but not Mathematics?

Now time to make your own tables

- [Two way Tables](#)

6 A group of students were surveyed about whether or not they played soccer or netball. It was found that 15 played soccer, 16 played netball, 10 played both soccer and netball and 7 played neither soccer nor netball.

	Soccer	Not soccer	
Netball			
Not netball			

a Put this information in a two-way table like the one shown and find the missing numbers.

b How many students:
   i do not play soccer?
   iii play soccer or netball or both?
   v play soccer but not netball?
   ii do not play netball?
   iv play soccer or netball but not both?
   vi play netball but not soccer?

7 100 people were surveyed about their smoking and drinking habits. It was found that 19 people smoked cigarettes, 13 both smoked and drank alcohol and 15 people neither smoked nor drank alcohol.

	Drink	Do not drink	
Smoke			
Do not smoke			

a Put this information in a table like the one shown and find the missing numbers.

b How many people:
   i drink alcohol?
   iii do not smoke?
   v smoke or drink but not both?
   vii smoke but do not drink?
   ii do not drink alcohol?
   iv smoke or drink or both?
   vi drink but do not smoke?

1
a 30   **b** 17   **c** 13   **d** 11
e 19   **f** 10   **g** 3   **h** 9
i 8   **j** 27   **k** 18   **l** 21
m 18   **n** 9   **o** 3   **p** 8
q 10

2
a 230   **b** 116   **c** 114   **d** 185
e 45   **f** 29   **g** 98   **h** 132
i 103   **j** 98   **k** 29   **l** 98
m 16

3
a 16   **b** 17   **c** 11   **d** 22
e 11   **f** 8   **g** 5   **h** 6

4 a $v = 3, w = 8, x = 15, y = 7, z = 12$
b   **i** 15   **ii** 11   **iii** 8   **iv** 18
    v 10   **vi** 5   **vii** 7   **viii** 3

5 a $k = 27, l = 4, m = 30, n = 2, p = 5$
b   **i** 31   **ii** 30   **iii** 27   **iv** 34
    v 7   **vi** 2   **vii** 4   **viii** 3

6 a

	Soccer	Not soccer	
Netball	10	6	16
Not netball	5	7	12
	15	13	28

b i 13   **ii** 12   **iii** 21   **iv** 11
  v 5   **vi** 6

7 a

	Drink	Do not drink	
Smoke	13	6	19
Do not smoke	66	15	81
	79	21	100

b i 79   **ii** 21   **iii** 81   **iv** 85
  v 72   **vi** 66   **vii** 6