Two-Way Tables

A two-way table is a useful way to organize data that can be categorized by two variables.

Suppose you asked 20 children & adults whether they liked broccoli. The table shows one way to arrange the data.

	Yes	No
Children	3	8
Adults	7	2

What can we find with the table?

(1) We can find the totals of each category.
(2) We can identify how many people were surveyed.
(3) We can calculate percentages of categories

Ex 1) The table shows the number of books sold at a library sale. Complete the two-way table & answer the questions.

	Fiction	Nonfiction	Total
Hardcover	28	52	80
Paperback	94	36	130
Total	122	88	210

(1) How many total paperback books were sold?
130 total

(2) What percentage of nonfiction books were hardcover?

$\frac{52}{88} \approx 59\%$

Ex 2) The classes at a dance academy include ballet & tap dancing. Complete the table & answer questions.

		Ballet		
		Yes	No	Total
Tap	Yes	38	52	90
	No	86	24	110
	Total	124	76	200

If you are given that a student is taking ballet, what is the probability that the student is not taking tap?

$\frac{86}{124} = 69\%$

Ex 3)

A) How many total students had correct supplies for class? 15 students

		Did Homework		TOTALS
		Male	Female	
Has correct supplies for class	Yes	5	10	15
	No	6	8	14
TOTALS		11	18	29

B) What percentage of females had correct supplies? $\frac{10}{18} = 56\%$

Ex 4)

		Gender		TOTALS
		Male	Female	
Eat breakfast on a regular basis	Yes	190	110	300
	No	130	165	295
TOTALS		320	275	595

A) How many total students participated in the survey?
595 students

B) What percentage of males did not eat breakfast?
$\frac{130}{320} = 41\%$

C) What percentage of students who ate breakfast were females? $\frac{110}{300} = 37\%$