



Working With Numbers

‘How To’ Booklet 8

Working with Numbers

By the end of this booklet you should be able to do calculations requiring addition, subtraction, multiplication and division.

You will need a calculator as well as pen and paper.

RULE

To express a decimal fraction, written in millions, as a whole number, multiply by 1,000,000

To express a decimal fraction, written in metres, as a whole number of centimetres, multiply by 100.

1	The school budget is £3.25 million. Write that in full.
2	The winning jump was 8.1 metres. Write that in centimetres.
3	One television station was 1.9 million viewers, another had 1.2 million. Write these numbers in full and then add them together.
4	Three lorries measuring 2.4m, 1.95m and 2.35m are next to each other. Write these in centimetres and add them together.

Addition and Subtraction

RULE

To express a decimal fraction, written in millions, as a whole number, multiply by 1,000,000,

To express a decimal fraction, written in metres, as a whole number of centimetres, multiply by 100.

Question – in a record shop there were 121 people; of these, 10 were staff, 9 were children in pushchairs, 15 were waiting for friends, the rest were buying records.
How many were buying records?

Answer – either – start with 121 and subtract those not buying records:-

121 subtract 10 (staff)
 subtract 9 (children)
 subtract 15 (waiting for friends) = 87 buying records.

OR – add together those not buying records

$10 + 9 + 15 = 34$
 $121 - 34 = 87$ buying records.

As you will it does not matter, the answer is the same.

Try these: -

5	In an election 3 candidates received 1,532 votes, 2,706 votes and 5,100 votes. How many people voted?
6	A nursing home had 29 male and 36 female residents.
a	How many is that altogether?
b	How many more female than male residents is that?
7	Annual wages at a Leisure Centre were: £20,000 for the manager £15,000 for the deputy manager £12,500 each for the two full time staff A total of £50,000 for part time and cleaning staff
a	How much was the wage bill for the 4 full time staff?
b	What is the total wage bill?
c	How much less do the part time staff earn than the full time staff?

Multiplying and Dividing Questions

In these questions you may have to multiply, divide as well as add and subtract.
Think carefully about which you are to use.

Try these questions, checking your answers as you go.

Population figures in millions.

Year		India	China	USA
1972		550	850	210
1981		680	1010	230
1991		840	1112	250
8	a	Write in full the population of the USA in 1971		
	b	In 1991 how many people lived in India, China and the USA altogether?		
	c	If the 1991 population of China doubles by the year 2001, what will it become?		
	d	In 1981 India vaccinated half its population, how many was that?		
	e	What was the increase in the USA population from 1971 to 1991?		
	f	Is it true that in 1991 the population of china was over four times that of the USA?		
9	On any school trip, the County Council insists on one teach for every 15 pupils over 11 years, one teacher for every 10 pupils over 11 years. Every trip that takes boys and girls must have a mixture of male and female teachers.			
	a	How many teachers will be needed for 60 thirteen year olds?		
	b	How many for 60 eight year olds?		
	c	Would 3 teachers be enough for 30 fifteen year olds plus 20 ten year olds?		
10	Sales of soap powder for one month			
		Blue rinse- 50,000; White Wonder -20,000; In the Pink - 40,000		
	a	How many packets of soap powder that were not white were sold?		
	b	How many more packets of Blue Rinse were sold than White Wonder?		
	c	In the Pink sold twice as many packets as which powder?		

You will need to use these techniques in your Application of Number work.
Remember to show your working so that you can get credit for it.