Year 5 Problems Summer 2 Week 2

Objective:

- Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.

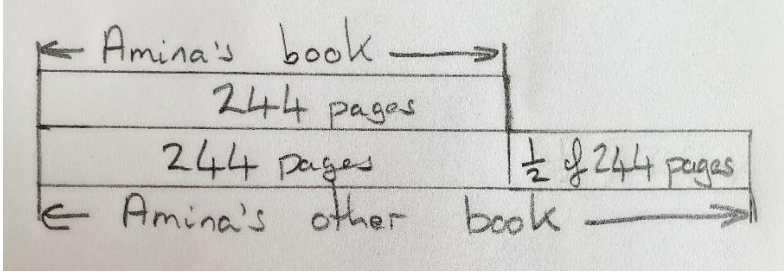
Amina has a book that has 244 pages.

She has another book that has 1½ times as many pages.

How many pages long is this book?

Model answer

We know Amina has two books. One book has 244 pages. The other book has 1½ times as many pages. *Drawing a bar model could help us see the problem more clearly.*



I can see now that I need to add 244 to half of 244 to find how many pages the other book has altogether.

I shall calculate half of 244 first. I need to decide whether to use a column method, a mental method, or some jottings. The numbers are easy to work with so I shall tackle this mentally.

½ of 244 = 122

I can check this calculation by doubling 122 and seeing if I get back to 244.

2 x 122 = 244

So I know this calculation is correct.

I know I must add the number of pages of the first book (244) to half the number of pages of the first book (122). This will tell me how any pages there are in the second book altogether.

244 + 122 =

To estimate the answer first I can round each number to the nearest multiple of 10 and then add them together.

240 + 120 = 360

I know my answer will be approximately 360.

244 + 122 = 366

I did this mentally, but some might prefer a column method.
My answer of 366 is close to my estimate of 360.

The answer to the problem is that Amina's second book is 366 pages long.

Now try these problems.

Jack has a book that has 172 pages.

He has another book that has 1½ times as many pages.

How many pages long is this book?

Space for working

Stafan has a book that has 360 pages.

He has another book that has ¾ as many pages.

How many pages long is this book?

Space for working

Answers:

- Jack's second book is 258 pages long.
- Stefan's second book is 270 pages long.