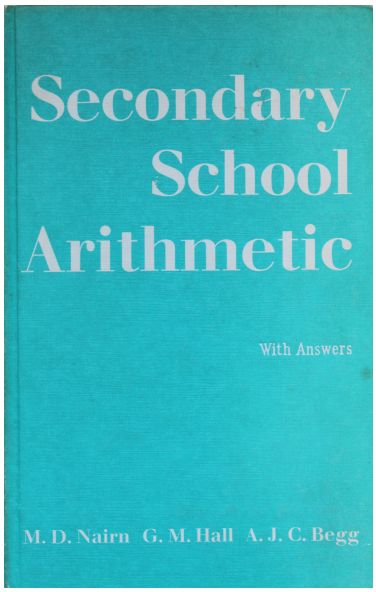
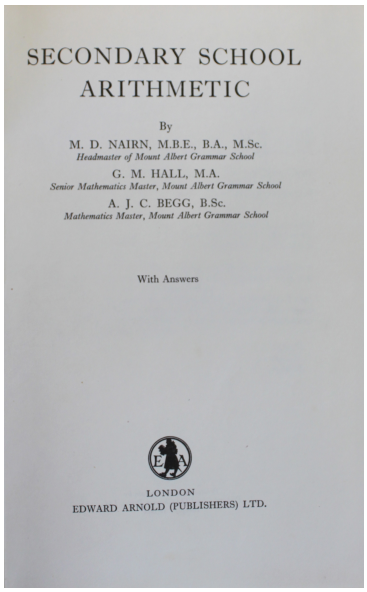
A HISTORY OF THE SCHOOL IN 100 OBJECTS

SECONDARY SCHOOL ARITHMETIC

Size: Cover: 8¾in x 5¾in x 1in / 220mm x 150mm x 25mm
Pages: 8½in x 5½in / 210mm x 130mm

Description: A book written in 1965 and published in 1966 by Edward Arnold (London), cased, sewn signatures (each 16 leaves), 327pp plus 32pp answers. It has an international air about it, published and printed in England and the Preface refers to the generic "first year" and "second year". Some of the money problems use francs.





Discussion: As seen from the images, this was an all Mount Albert Grammar School project. MD (Murray) Nairn was Headmaster at the time, GM (Maurice) Hall was Head of Mathematics and AJC (Andy) Begg was a mathematics teacher.

The publication of the book was timely. Decimal currency was introduced in Australia on 14 February 1966, in New Zealand on 10 July 1967 and in the UK on 15 February 1971.

The authors were ahead of the game. After a quick run through "The Four Rules of Number" it was straight into Chapter 2 on page 12; Money. It began with this introduction:

"Revision of the four rules has been done for number, whether whole numbers or decimals.

"Revision of these same four rules is necessary with money. The work is delightfully easy with a decimal coinage. There is nothing new to learn since the same rules apply as for decimal numbers. Therefore a number of examples will be given without explanation."

“1. $2.80 + $3.75 + $3.34” (question 1, Exercise 2(a), Addition, page 12.) The instruction was to rewrite placing decimal point under the decimal point.

The first real ‘problem’ was:
“1. What would the cost of 44 articles amount to if each article cost $5.34?” (Question 1 Exercise 2(b), Problems in money, page 13.)
This would be the first text-book problem in decimal currency asked of New Zealand children.
They got a bit harder, as this example demonstrates.
“17. Find the compound interest that results from an investment of $863.21 for 3yr, at an interest rate of 4% per annum.” (Question 17, Exercise 21(a), Compound Interest, page 182.)
Pocket-sized calculators were several years away (and then very expensive). Problems like this were worked out mechanically.

Many measurement problems remained in imperial units as these examples show:
“Find the cost of 3 tons, 12cwt. 1qr. 16lb. of sugar at $7.84 per cwt.” (example 1, Practical Method, p 108.) To work this out one would need to know that there are 20 hundredweight (cwt) in a ton, four quarters in a cwt, and 28 pounds (lb) in a quarter.

“1. An area of 100ft. x 44ft. required 50lb. of grass seed for a lawn. What length strip 33ft wide can be planted with 55lb of seed?” (Question 1, Exercise 16(b) Compound Proportions, page 136.)

“Change 8,347mi. to mi. fur. ch. to one decimal place of chains. (Example 2 Changing Decimal Fractions, page 167.) To work this out one would need to know that there were 8 furlongs (each 220yards) in a mile (1760 yards) and 10 chains (each 22yards) in a furlong.

When Murray Nairn retired in 1969 Maurice Hall became the fourth Headmaster, Old Boy Andy Begg (who was a prefect in his last year, 1958) left the staff in 1968 to be Head of Mathematics at St Kentigern College.

These three men were outstanding teachers of mathematics. They knew that imperial units of mass, length and capacity would persist for some time and the urgency was to get out the first book to deal with the new-fangled metric money.

Brian Murphy