

UNIT 8 *Arithmetic: Division of Decimals*

Teaching Notes

Historical Background and Introduction

The unit continues the development of the arithmetical topics, and follows directly from the previous work on multiplication (of decimals). Here we recap division of whole numbers, introduce the idea of division as a fraction, and the methods of long division, and complete the unit by putting the concepts into practice in a variety of contexts.

As with all our Year 7 Arithmetic Units, for some pupils this will be just a quick recap and revision of these concepts, but for others, it will be a real struggle, particularly when the added dimension of dividing decimal numbers is reached. The sample lesson plans will need to be carefully adapted to suit the actual needs and capabilities of your pupils. The mental aspect of simple division of whole numbers is crucial, and must be stressed for those who have not achieved instant recall.

Routes

	Standard	Academic	Express
8.1 Mental Division of Whole Numbers	✓	✓	✓
8.2 Division Methods for Whole Numbers and Decimals	(✓)	✓	✓
8.3 Division Problems	(✓)	✓	✓

Language

• BODMAS	✓	✓	✓
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(✓) denotes extension work for these pupils

Misconceptions

- $8 + 2 \times 3$ can easily be mistaken for $(8 + 2) \times 3 = 30$ (rather than $8 + 6 = 14$)
- not all divisions have exact answers, even simple ones such as $7 \div 3$, which equals 2, with remainder 1, or $2\frac{1}{3}$ or 2.3333...
- $24 \div 8$ is the same number as the fraction $\frac{24}{8}$ $\left(= \frac{12}{4} = \frac{6}{2} = 3 \right)$