

Preface

The primary aim of **MATHS Problem-Solving Strategies Books 1-6** is to help pupils develop their mathematical thinking skills and expand their knowledge of mathematical concepts and formulae. Each book provides ample practice on various routine and practical mathematical problems.

The topics selected for each level are based on the latest syllabus. Examples of common word problems are given followed by the step-by-step working to show the process of problem solving. In **MATHS Problem-Solving Strategies Books 3-6**, notes are included. These notes highlight important and relevant mathematical concepts and formulae.

Challenging problems, which are indicated with asterisks, are also found in each topic. These challenge pupils to master their skill in higher-order thinking. Revision papers provide an overall assessment of the pupils' progress in learning these mathematical concepts.

Pupils will find this book useful in preparing for their examinations.

Francis Teo

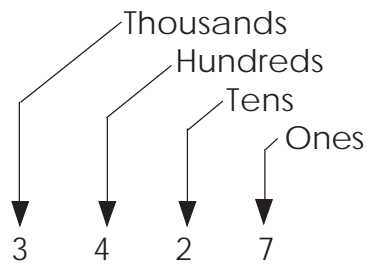
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Whole Numbers (Addition And Subtraction)

NOTES



In 3427, the digit 3 stands for 3 thousands, the digit 4 stands for 4 hundreds, the digit 2 stands for 2 tens and the digit 7 stands for 7 ones.

Example 1

Find the sum of 4 thousands, 7 hundreds and 29 ones.

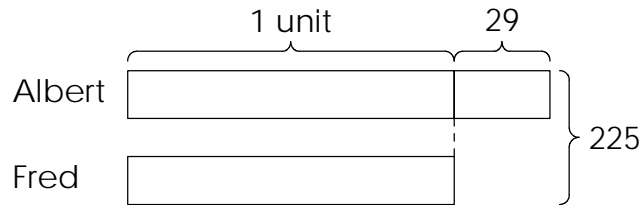
$$\begin{aligned} 4 \text{ thousands} &= 4000 \\ 7 \text{ hundreds} &= 700 \\ 29 \text{ ones} &= 29 \end{aligned}$$

The sum is 4729.

$$\begin{array}{r} 4000 \\ 700 \\ + 29 \\ \hline 4729 \end{array}$$

Example 2

Albert and Fred have 225 marbles altogether. Albert has 29 more marbles than Fred. How many marbles does Albert have?



$$2 \text{ units} \rightarrow 225 - 29 = 196$$

$$1 \text{ unit} \rightarrow 196 \div 2 = 98$$

$$\begin{aligned} \text{Albert} &\rightarrow 1 \text{ unit} + 29 = 98 + 29 \\ &= 127 \end{aligned}$$

Albert has 127 marbles.

$$\begin{array}{r} \overset{1}{\cancel{2}} \overset{11}{\cancel{2}} \overset{15}{\cancel{5}} \\ - \\ \hline 196 \end{array}$$

$$\begin{array}{r} \\ 2 \overline{) 196} \\ \underline{-18} \\ \\ \\ \underline{-16} \\ \\ \\ \underline{00} \end{array}$$

$$\begin{array}{r} \\ + \\ \hline \\ \\ \underline{127} \end{array}$$

PRACTICE

1. A fruit seller has 312 mangoes. He has 149 more apples than mangoes. How many mangoes and apples does he have?

2. There are 139 more boys than girls in a school. If there are 472 boys, how many pupils are there in the school?

3. Mrs Wilkins baked 592 biscuits. She ate some of them, sold 245 of them and had 307 of them left. How many biscuits had she eaten?

4. A television set costs \$293 less than a refrigerator. If the television set costs \$622, find the total cost of both items.

*5. David has 137 more marbles than Joel. Michael has 49 fewer marbles than Joel. How many more marbles does David have than Michael?

6. There are 1425 adults at a concert. 626 of them are men. How many more women than men are there at the concert?