

## Newman's error analysis

The following are examples of word problems that are suitable for use in lessons focusing on the five hurdles described in Newman's error analysis.

These examples have not been placed in any particular order. Teachers will need to select examples, using the *Learning framework in number* to ensure that the problems are pitched at the students' level of understanding. For example, a student who is at Place value level one should not be asked to solve problems involving three-digit numbers.

An important principle to bear in mind is that the mathematical content of the lesson needs to be familiar to the students if it is not to hinder the lesson focus on working mathematically.

### **Word problems with a focus on addition, subtraction or place value**

Con spent half of his money at the movies. He then had lunch and spent half of what was left. After that he had only \$5 left. How much money did he start with?

Kim's meal at a restaurant cost half as much as her dad's meal. Kim and her dad paid \$18 altogether for their meals. How much did Kim's meal cost?

A school hall can hold 450 chairs. There are 289 chairs in the hall. How many more chairs can be put in the hall?

The first international cricket team to tour England was an Aboriginal team. It won 14 matches, drew 19 matches and lost 14 matches. How many matches were played?

Monique had 65 coloured pencils. She gave 24 to her brother. How many coloured pencils did Monique have left?

At the Melbourne Olympics, Australia won 13 gold medals, eight silver medals and 14 bronze medals. Altogether, how many medals did Australia win?

A rectangular paddock has a perimeter of 50 metres. Each long side has a length of 15 metres. What is the length of each short side?

A baker made a total of 175 rolls on the weekend. She made 15 more rolls on Saturday than on Sunday. How many rolls were made on Sunday?

Rachel brought 45 stickers to school. She put one away for herself. Then she gave one to each of her friends and had 17 left. How many friends does Rachel have?

### **Word problems with a focus on multiplication and division**

Mai bought five packets of cards. Each packet had six cards in it. What was the total number of cards?

George is cooking 15 sausages. He wants to put three sausages on each plate. How many plates will he need?

Yani and his four friends shared 15 cards equally. How many cards should each of them get?

Sean wrote a number on a piece of paper. If he multiplied his number by five and divided the result by two, the answer would be 30. What was Sean's number?

There are 67 students in Year 5. The school lunch tables seat four students each. What is the least number of tables needed to seat all Year 5 students?

Tim shared 20 pencils. He gave his three friends six pencils each. How many pencils were left over?

Lin is packing 34 cakes into boxes. Each full box holds five cakes. What is the smallest number of boxes Lin needs to pack all the cakes?

A group of students paid \$4 each to see a show. Altogether the group paid \$124. How many students were in the group?

