Unit 3

Strengthen activities

MISCONCEPTION: **When writing additions in columns, children may learn a 'trick' throughout the lesson, simply adding the digits that they see, rather than thinking of the value of each digit.**

Answers

Practice Book p77

2. a) 62 + 24 = 86. There are 4 ones + 2 ones = 6 ones, and 6 tens + 2 tens = 8 tens.

b) 28 + 51 = 79. There are 8 ones + 1 one = 9 ones, and 2 tens + 5 tens = 7 tens

3. Children can explain the addition of ones and tens in:
   a) 12 + 13 = 25
   b) 12 + 14 = 26
   c) 13 + 14 = 27
   d) 38 + 11 = 49
   e) 48 + 11 = 59
   f) 79 = 58 + 21

MISCONCEPTION: **When adding three numbers, children may think that the numbers have to be added in the order that they are given.**

Answers

Children suggest three numbers, two of which form a bond to 10, such as 3 + 6 + 7.

Children can choose three numbers where no two form a bond to 10, such as 2 + 7 + 6.

MISCONCEPTION: **When representing a calculation using a bar model, children may struggle to show whether they are being asked to find a part or a whole.**

Answers

Q1 on Practice Book p100

The question mark goes on the bar for Mum, as this is the unknown value.

Deepen activities

Answers

Activity 1

Circle = 9, Square = 1, Star = 7

Circle Star – Star Circle = 18

Activity 2

Children draw an addition story problem with an answer of 99, and a subtraction story problem with an answer between 45 and 55.

Activity 3

a) 1 + 5 + 9 = 15
   1 + 6 + 8 = 15
   2 + 4 + 9 = 15
   2 + 5 + 8 = 15
   2 + 6 + 7 = 15
   3 + 4 + 8 = 15
   3 + 5 + 7 = 15
   4 + 5 + 6 = 15
   The numbers can be added in any order.

b) 9 + 8 – 2 = 15
   9 + 7 – 1 = 15

Unit 4

Strengthen activities

MISCONCEPTION: **When counting money, children may find it difficult to keep track of the running total, especially where there are different coins or notes.**

Practice Book p106

3. Children agree to start counting with the 50p, then the 5ps, then the 1ps. The total is 65p.

4. a) 20p + 10p + 5p + 5p = 40p
b) 50p + 10p + 10p + 10p + 2p = 82p

MISCONCEPTION: **Children may not understand the concept of 'change' and its connection with subtraction.**

50p – 42p = 8p.

8p change can be made from 8 × 1p, 4 × 2p, 5p + 2p + 1p, 5p + 1p + 1p + 1p, or a combination of 1ps and 2ps that total 8p.

MISCONCEPTION: **When solving story problems with more than one step, children may not comprehend what the question is asking them or what operations to use.**

Practice Book p129

1. a) The first step is to combine the cost of the two items, requiring an addition.
b) The second step is to use that total to find change from £20, which requires a subtraction.

Deepen activities

Activity 1

a) 1p + 2p + 5p = 8p
1p + 2p + 10p = 13p
1p + 2p + 20p = 23p
1p + 2p + 50p = 53p

1p + 5p + 10p = 16p
1p + 5p + 20p = 26p
1p + 5p + 50p = 56p

1p + 10p + 20p = 31p
1p + 10p + 50p = 61p
1p + 20p + 50p = 71p

2p + 5p + 10p = 17p
2p + 5p + 20p = 27p
2p + 5p + 50p = 57p

2p + 10p + 20p = 32p
2p + 10p + 50p = 62p

2p + 20p + 50p = 72p

5p + 10p + 20p = 35p
5p + 10p + 50p = 65p

5p + 20p + 50p = 75p

10p + 20p + 50p = 80p

Activity 2

Amy has £51, Bilal has £31, Cleo has £20.

Activity 3

Items cost £8, £17, £25 and £28.

The total is £78.

Unit 5

Strengthen activities

MISCONCEPTION: **Children may struggle to use the language of equal groups accurately. They may confuse the number of groups with the number in each group.**

Children can show and recognise the difference between groups of 3 and groups of 2. They can do the same for three groups and two groups.

MISCONCEPTION: **Children may struggle to recognise the structure of arrays, and may create arrays with different numbers in each row or column.**

Children correctly make an array showing 5 rows of 3.

MISCONCEPTION: Children may resort to a counting-in-ones strategy, rather than using knowledge of skip counting and repeated addition, and then progressing to known times-tables.

Textbook p211

Children work out 6×5 is $25 + 5 = 30$, and 4×5 is $25 - 5 = 20$.

They can apply a similar strategy to find other multiples of 5.

Deepen activities

Activity 1

Children draw a story picture showing the different numbers of groups of different sizes. They are able to show the difference between three groups of 2 and two groups of 3.

Activity 2

a) Calculations include commutative multiplications (e.g. 3×4 and 4×3) and repeated additions (e.g. $3 + 3 + 3 + 3$, and $4 + 4 + 4$).

b) Children use the calculations to rebuild an array accurately.

Activity 3

Cake = 6 or 5, Star = 5 or 6

Triangle = 4, Circle = 8, Square = 5

Strawberry = 6, Flower = 4