Unit 16: Numbers to 100

Counting to 100

➜ pages 71–73

1. There are 36 buttons.

2. Children should have written the following numbers onto the number line: 10, 20, 30, 40, 50, 60, 62.
There are 62 pegs.

3. a) There are 53 counters.
b) There are 18 counters.

4. Missing numbers from left to right:
a) 48, 49, 50
b) 71, 73, 74, 76
c) 61, 60, 59
d) 83, 85, 86

5. Children should have joined the dots to make a picture of a chick.

Reflect

Children should have counted from 34 to 62, completing the ten frames up to 62 as they went.

The most challenging sections of the count are likely to have been counting over the tens boundaries.

Exploring number patterns

➜ pages 74–76

1. square = 42, triangle = 66, circle = 70, pentagon = 9, parallelogram = 95, star = 29

2. Children should have filled in the missing numbers as follows:
a) second row: 28, 30
third row: 37, 39
fourth row: 48, 50
b) horizontal sequence: 54, 55, 56, 58
vertical sequence from top to bottom: 35, 55, 65, 85

3. a) 74
b) 30
c) 17
d) 47
e) one less than

4. Children should have shaded the numbers: 3, 13, 23, 33, 43, 53, 63, 73, 83, 93.
Children should have noticed that the shaded numbers are in a vertical line.

5. Children should have completed the pattern so that it reads as follows:
Horizontal sequence from left to right: 21, 22, 23
Vertical sequence from top to bottom:12, 22, 32

Reflect

Children should have positioned the numbers 15, 25, 46, 70 and 99 on the 100 square. The positions of the numbers may vary depending on the way in which they have oriented their 100 square. It should be clear from the positioning of their numbers where the 1 and the 100 would be on the square.

For example, if the child decided to orient their 100 square so that 1 is in the top left hand corner of the square and 100 is in the bottom right hand corner of the square, the numbers should have been placed as follows:

				15					
				25					
									70
								99	

Partitioning numbers (I)

➜ pages 77–79

1. a) Missing numbers on number line: 10, 20, 30, 37.
There are 37 apples.
b) There are 53 carrots.

2. Children should have matched the images to the place value grids and written in numbers as follows:
Top image ➜ bottom place value grid, 32
Middle image ➜ top place value grid, 28
Bottom image ➜ middle place value grid, 17

3. Children should have drawn:
a) 4 tens and 5 ones
b) 2 tens

4. It is possible to make six 2-digit numbers: 25, 26, 56, 52, 62, 65 using the three cards, assuming that you cannot use the same number twice. Children could have drawn and made their number using different objects and equipment, e.g. number line, tens and ones blocks, counters.

Reflect

There are many possible pairs of numbers children could have made using the 5 tens and 4 ones blocks. Each pair of numbers will total 54, e.g.

2 tens and 3 ones (23) and 3 tens and 1 one (31)

1 ten and 2 ones (12) and 4 tens and 2 ones (42)

5 tens (50) and 4 ones (4)

Partitioning numbers (2)

→ pages 80–82

1. a) Missing numbers on number line: 10, 20, 30, 40, 46. There are 4 rows of 10 rubbers. There are 6 more rubbers. There are 46 rubbers.
b) Missing numbers on number line: 0, 10, 20, 30, 40, 50, 53. There are 53 pencils.

2. Children should have completed the diagrams and number sentences as follows:
a) 25, 25
b) 9 (tens) and 7 (ones), 97

3. a) 45
b) 86
c) 7
d) 0
e) 36
f) 54
g) 20
h) 8

4. There are several possible pairs of numbers. Each pair of numbers should total 53, e.g.
21 = 20 + 1 and 32 = 30 + 2
42 = 40 + 2 and 11 = 10 + 1
50 = 50 + 0 and 3 = 0 + 3

5. a) There are many possible answers, e.g. 56, 52, 257
b) There are many possible answers, e.g. 65, 25, 5
c) There are many possible answers, e.g. 72, 65, 752
d) 26

Reflect

Answers will depend on the children's dice roll. They could have drawn and made the number in different ways, e.g. using counters, part-whole diagrams or tens and ones blocks.

Comparing numbers (I)

→ pages 83–85

1. Ray planted more than Ola.

2. a) 47 > 32
b) 70 > 67 or 67 < 70
c) 26 < 28 or 28 > 26

3. a) The greater number is 34. This is because 30 > 20 (or 20 < 30). Alternatively, some children could have written 34 > 29 (or 29 < 34).
b) The smaller number is 74. This is because 4 < 6 (or 6 > 4). Alternatively, some children could have written 74 < 76 (or 76 > 74).

4. Children should have added 4 counters so there are 30 counters in the left-hand set of ten frames.

5. Children should have drawn 1 to 3 beads on the bead string and 5 to 10 counters in the ten frame.

Reflect

Children could have described a range of methods, e.g.

I would make the numbers with tens and ones blocks and line up the blocks to see which number is greater and which is smaller.

I would show each number on a bead string and see which had more beads.

I know 66 is smaller than 72 because it has 6 tens but 72 has 7 tens.

Comparing numbers (2)

→ pages 86–88

1. a) 25 is less than 28. This is because 5 < 8 (or 8 > 5). Alternatively, some children could have written 25 < 28 (or 28 > 25).
b) 40 is equal to 40. 40 = 40.

2. a) 64 > 48
b) 90 < 95
c) 23 < 28
d) 33 = 33
e) 72 > 27
f) 55 > 5

3. Children should have circled the following numbers:
a) 39
b) 9

4. Children should have circled the following numbers:
a) 75
b) 19

5. Children should have written the following digits into the gaps in the number sentences from top to bottom:
8 or 9
any digit from 0 to 6
any digit from 5 to 9

Reflect

Children could have suggested and described different methods, e.g.

I can compare 54 and 58 by looking at the tens digit in each number. This is the same so I need to compare the ones. 4 is less than 8 so 54 is less than 58.

I can compare 15 and 76 by looking at the tens digit in each number. 15 has 1 ten but 76 has 7 tens so 76 is bigger than 15.

I can compare the numbers by making them with tens and ones blocks and lining up the blocks for each number underneath each other to see which is the smaller number and which is greater.

Ordering numbers

→ pages 89–91

1. Children should have circled 54.

2. 28, 44, 58

3. a) 63 < 65 < 72
b) 11, 30, 38, 48 or 11 < 30 < 38 < 48

4. a) 64 > 48 > 47
b) 33, 31, 30, 13 or 33 > 31 > 30 > 13

5. Assuming the same card cannot be used twice:
a) 36
b) 98

6. Children should have selected or written 27, possibly by circling the picture showing 27 made with tens and ones blocks.

Reflect

40 < 44 < 54 < 61 or 40, 44, 54, 61.

Children could have described different methods for ordering the numbers, e.g.

I looked at how many tens each number has and then how many ones.

I marked each number of a number line to compare them.

Bonds to 100 (1)

→ pages 92–94

1. a) 70 + 30 = 100 or 30 + 70 = 100
b) 90 + 10 = 100 or 10 + 90 = 100
c) 60 + 40 = 100 or 40 + 60 = 100

2. Children should have coloured 20 counters or 80 counters (or each set in a different colour).

3. a) 40, 90
b) 60 + 40 = 100, 40 + 60 = 100, 100 − 40 = 60, 100 − 60 = 40 or
10 + 90 = 100, 90 + 10 = 100, 100 − 90 = 10, 100 − 10 = 90

4. a) 40 + 60 = 100 50 + 50 = 100
30 + 70 = 100 0 = 100 − 100
100 − 90 = 10 100 − 20 = 80
b) 60 + 40 = 30 + 70 10 + 90 = 90 + 10 (though other answers are possible, e.g. 10 + 80 = 90 + 0)

5. circle = 50, triangle = 5, heart = 12

Reflect

The following answers are possible:

10 + 90 = 100, 20 + 80 = 100, 30 + 70 = 100, 40 + 60 = 100, 50 + 50 = 100, 60 + 40 = 100, 70 + 30 = 100, 80 + 20 = 100, 90 + 10 = 100

Some children might also have included: 0 + 100 = 100 and 100 + 0 = 100.

Bonds to 100 (2)

→ pages 95–97

1. a) There are 4 rows shaded. There are 6 rows not shaded. 4 + 6 = 10 or 6 + 4 = 10
b) There are 40 squares shaded. There are 60 squares not shaded. 40 + 60 = 100 or 60 + 40 = 100

2. a) 8 + 2 = 10 or 2 + 8 = 10
b) 6 + 4 = 10 or 4 + 6 = 10

3. Children should have circled the following bonds:
Bonds to 10: 7 + 3, 5 + 5, 2 + 8
Bonds to 100: 90 + 10, 10 + 90, 100 + 0, 20 + 80

4. a) 5 + 5 = 10, 50 + 50 = 100
b) 2 + 8 = 10, 80 + 20 = 100
c) 100 − 30 = 70, 10 − 3 = 7
d) 20 + 80 = 100, 100 − 20 = 80

5. There are 80 red apples.

Reflect

Children should have been able to use their knowledge of bonds to 10 to help them identify the missing number in bonds to 100.

End of unit check

→ pages 98–99

My journal

Children should choose a clear, concrete method (for example, Base 10 equipment, counters, a bead string) to represent 75.

They should write that 75 is made up of 7 tens and 5 ones and complete the part-whole model to show 75 = 70 + 5 (with the parts in either order).

Their drawing should clearly represent 75.