Place Value and Number

2-digit place value

Objectives

Day 1

Know what each digit means in a 2-digit number.

Know what each digit means in a 2-digit number.

Day 2

Know what each digit means in a 2-digit number. Locate numbers on a beaded line.

Compare numbers using the symbols < and >. Locate numbers on a landmarked line.

Day 3

Place 2-digit numbers on a beaded line. Suggest a number between neighbouring multiples of 10.

Round 2-digit numbers to the nearest multiple of 10.

Place Value and Number

2-digit place value

Short Mental Workouts

Day 1

Count in 1s and 10s to 100

Day 2

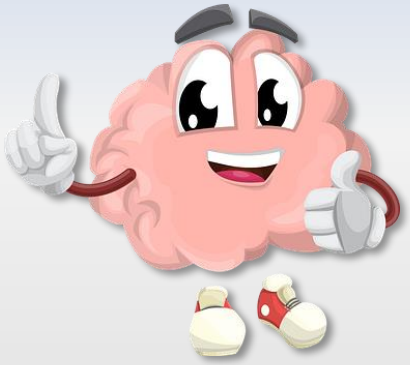
Recite numbers to 100

Day 3

Place value

Place Value and Number

2-digit place value

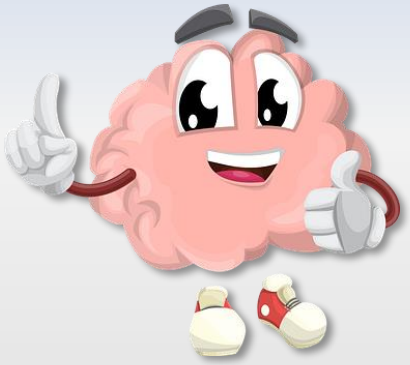


Short Mental Workout

Count in 1s and 10s to 100

Place Value and Number

2-digit place value



Short Mental Workout

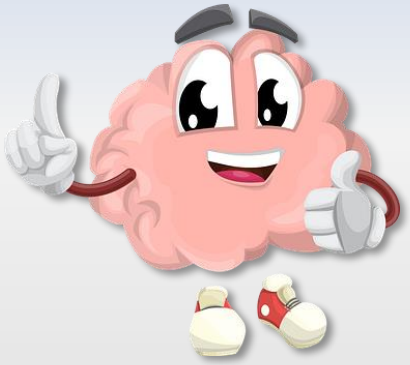
Recite numbers to 100

1-100 number grid

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Place Value and Number

2-digit place value



Short Mental Workout

Place value

Place Value and Number

2-digit place value

Objectives

Day 1

Know what each digit means in a 2-digit number.

Know what each digit means in a 2-digit number.

How much money is there?

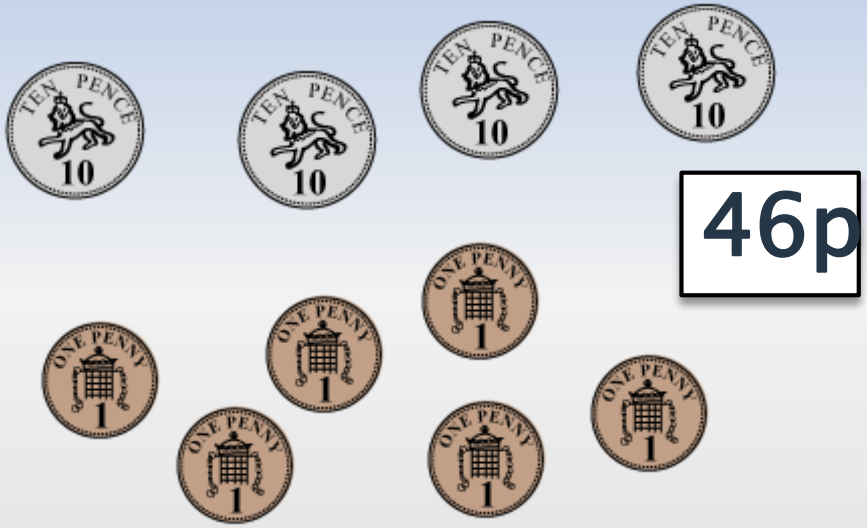
23p

There is 23p.
The 2 stands for the number of 10s and the 3 stands for the number of 1s.

Day 1: Know what each digit means in a 2-digit number. Know what each digit means in a 2-digit number.

Y1 – Count the 10ps and the 1ps.

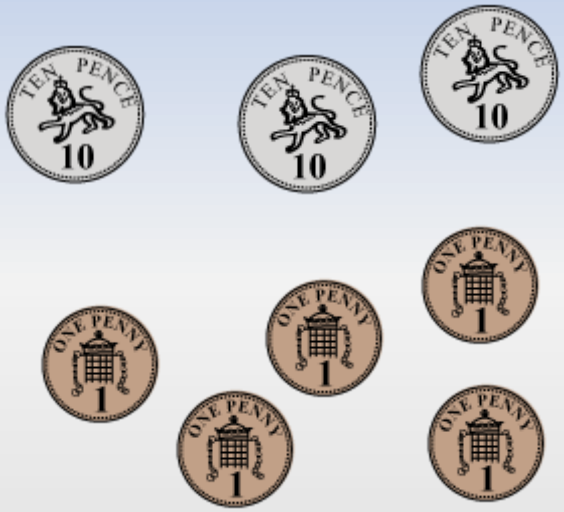
Y2 – How much altogether?



40p + 6p = 46p
The 4 stands for the number of 10s and the 6 stands for the number of 1s.

Day 1: Know what each digit means in a 2-digit number. Know what each digit means in a 2-digit number.

Y1 – Find the total amount of money.



35p

Y2 – Write a place value addition.

30p + 5p = 35p
The 3 stands for the number of 10s and the 5 stands for the number of 1s.

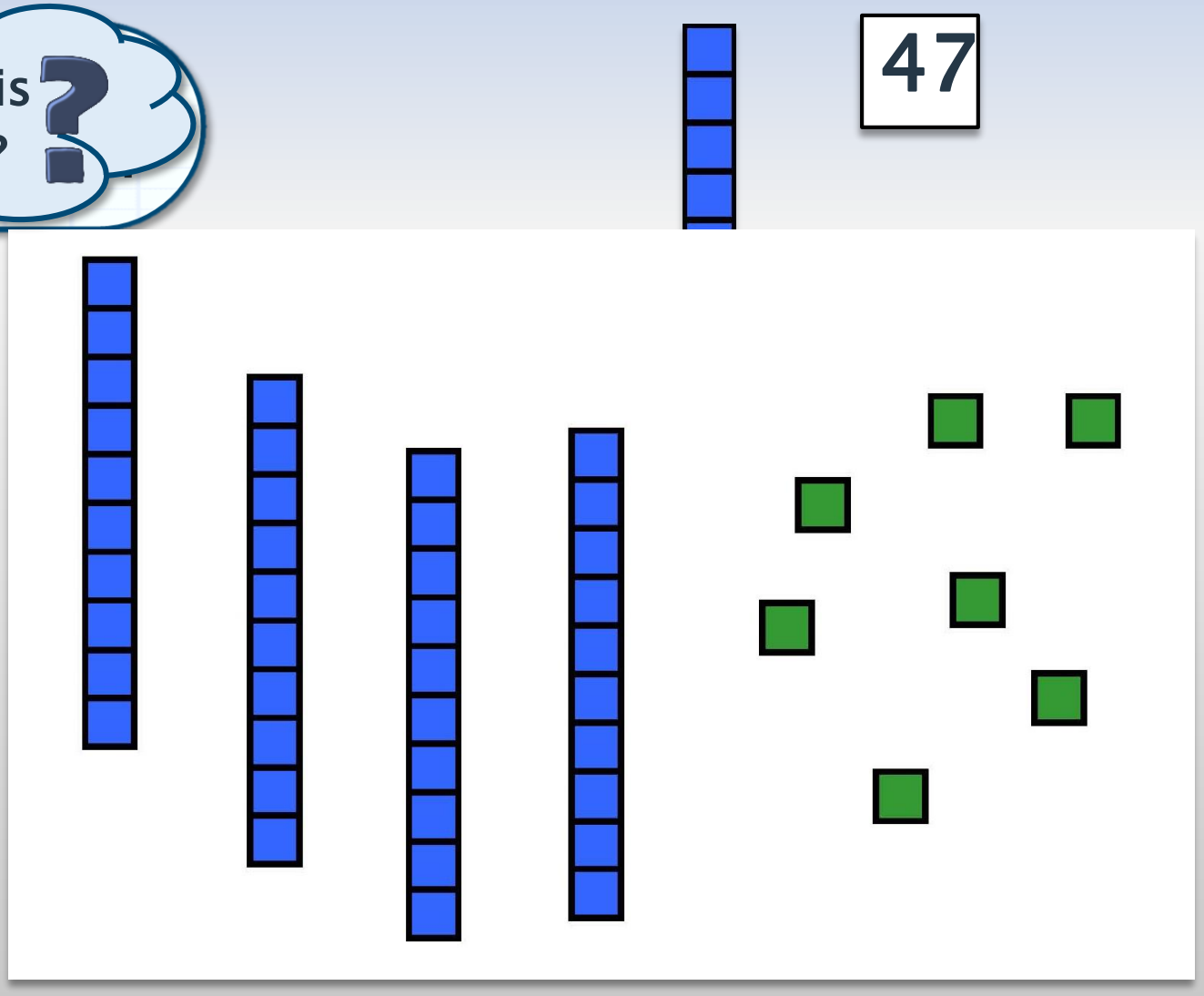
How many 10ps and 1ps do we need to make 52p?

52p

Let's count the coins to check…

Day 1: Know what each digit means in a 2-digit number. Know what each digit means in a 2-digit number.

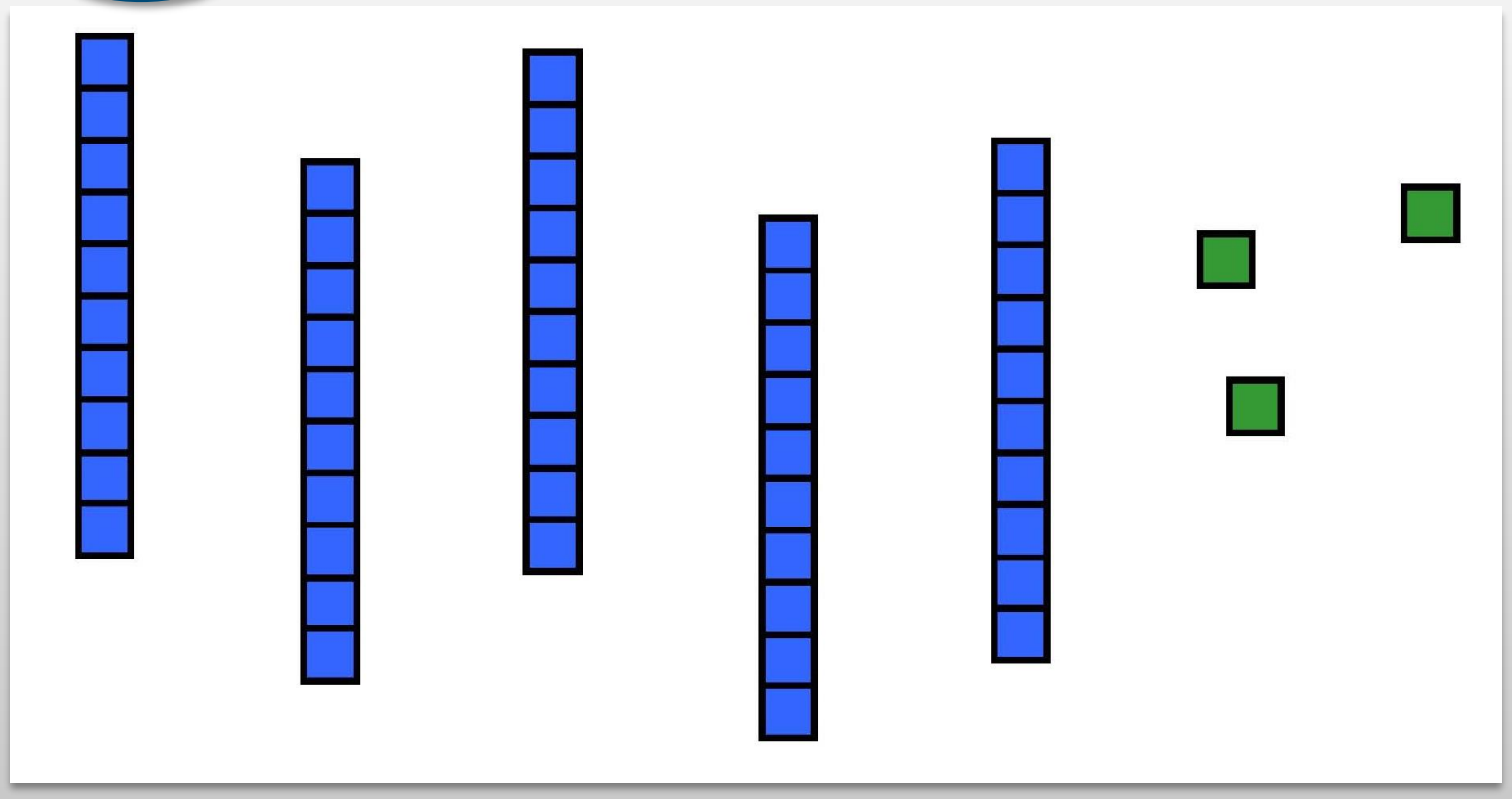
What number is this showing?



Day 1: Know what each digit means in a 2-digit number. Know what each digit means in a 2-digit number.

What number is this showing?

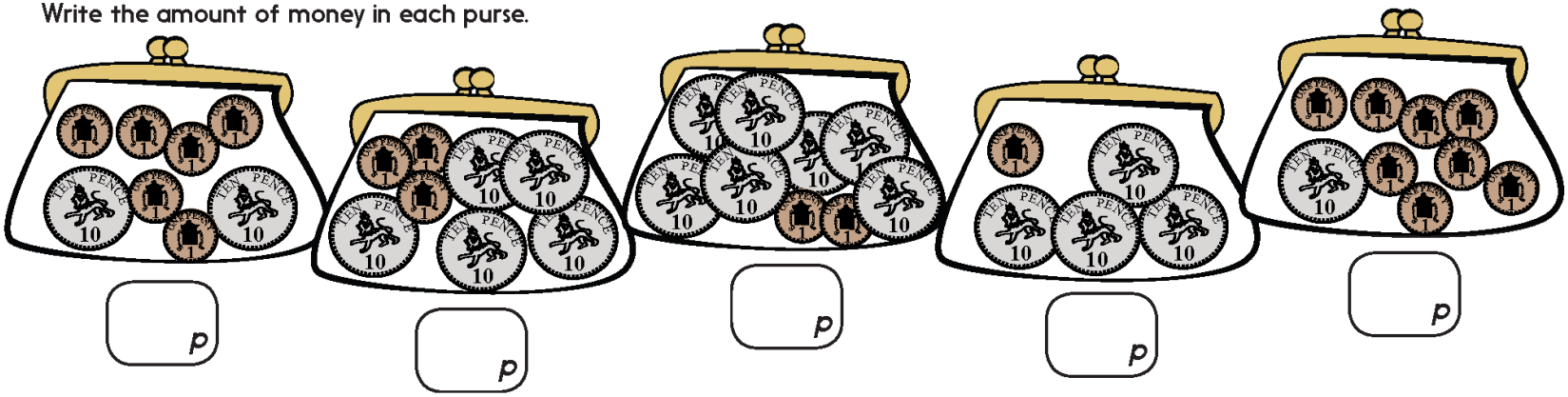
53



Place value

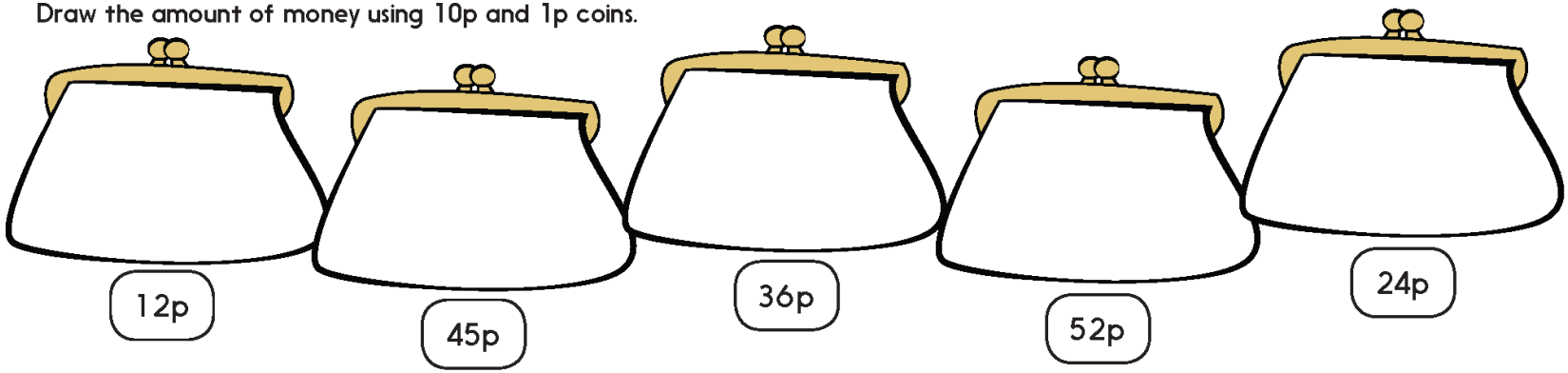
Sheet 1

Write the amount of money in each purse.



p p p p p

Draw the amount of money using 10p and 1p coins.



12p 45p 36p 52p 24p

Challenge

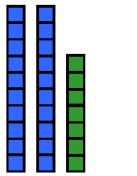
Draw an amount between 60p and 70p.

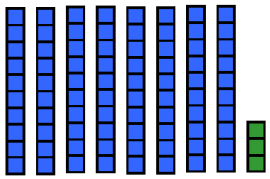
Challenge

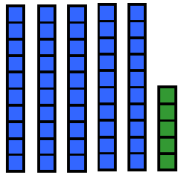
Place value

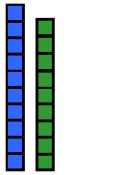
Sheet 2

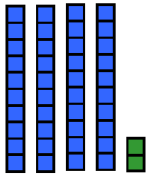
Write the number below each picture.

1. 

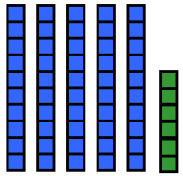
2. 

3. 

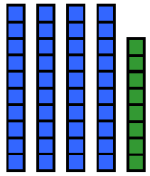
4. 

5. 

Complete these additions.



56 = 50 + ☐



48 = ☐ + 8

37 = ☐ + 7

29 = ☐ + 9

Challenge

Draw 10s and 1s to show a 2-digit number smaller than any on this page.
Draw 10s and 1s to show a 2-digit number bigger than any on this page.

Place Value and Number

2-digit place value

Objectives

Day 2

Know what each digit means in a 2-digit number. Locate numbers on a beaded line.

Compare numbers using the symbols < and >. Locate numbers on a landmarked line.

Day 2: Know what each digit means in a 2-digit number. Locate numbers on a beaded line. Compare numbers using the symbols < and >. Locate numbers on a landmarked line.

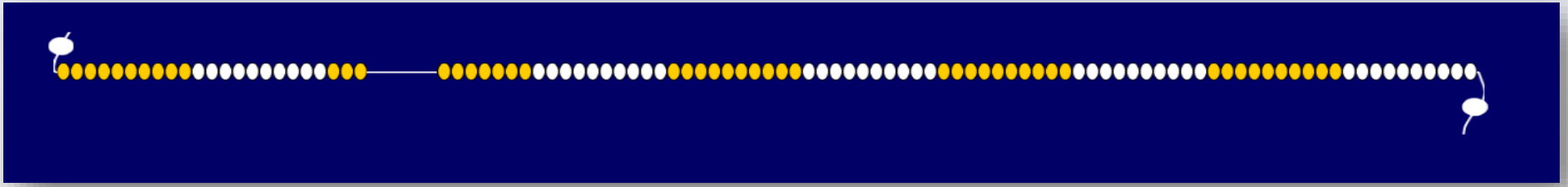
Give each pair of children a set of 10s and 1s place value cards.

40

Make 45 using your place value cards.

5

Day 2: Know what each digit means in a 2-digit number. Locate numbers on a beaded line. Compare numbers using the symbols < and >. Locate numbers on a landmarked line.



How many beads?

Use the place value cards to show your answer.

Day 2: Know what each digit means in a 2-digit number. Locate numbers on a beaded line. Compare numbers using the symbols < and >. Locate numbers on a landmarked line.

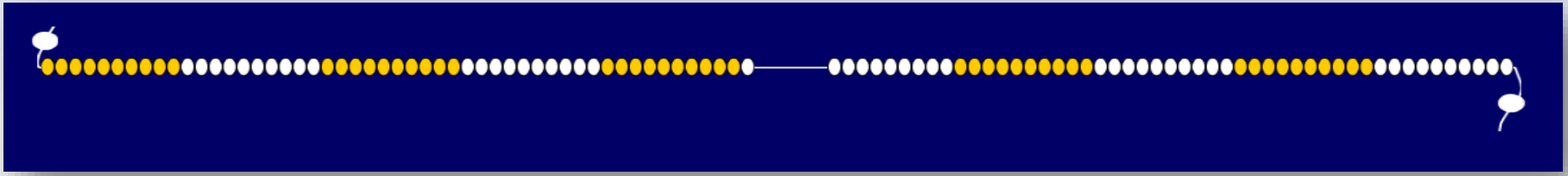
The 2 tells us how many groups of 10 there are.

2 0

What is quicker?

The 3 tells us how many 1s there are.

Day 2: Know what each digit means in a 2-digit number. Locate numbers on a beaded line. Compare numbers using the symbols < and >. Locate numbers on a landmarked line.

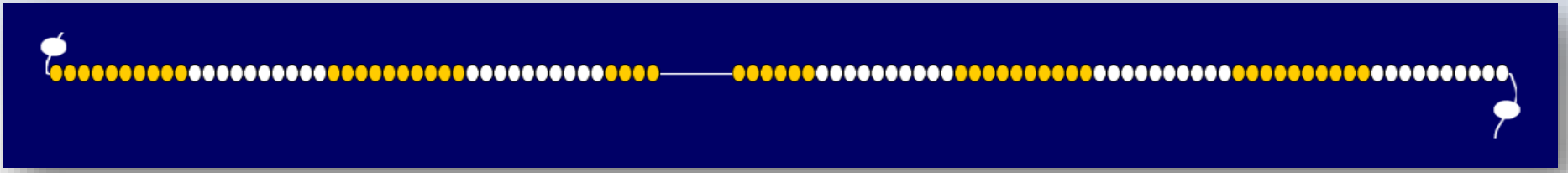


How many beads?

Use the place value cards to show your answer.

Day 2: Know what each digit means in a 2-digit number. Locate numbers on a beaded line. Compare numbers using the symbols < and >. Locate numbers on a landmarked line.

Day 2: Know what each digit means in a 2-digit number. Locate numbers on a beaded line. Compare numbers using the symbols < and >. Locate numbers on a landmarked line.

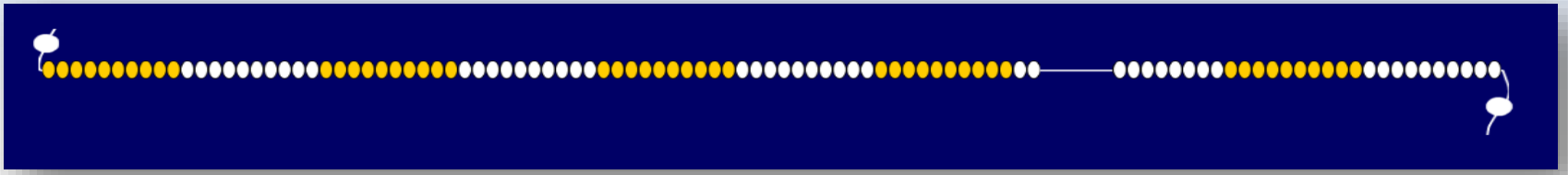


How many beads?

Use the place value cards to show your answer.

Day 2: Know what each digit means in a 2-digit number. Locate numbers on a beaded line. Compare numbers using the symbols < and >. Locate numbers on a landmarked line.

Day 2: Know what each digit means in a 2-digit number. Locate numbers on a beaded line. Compare numbers using the symbols < and >. Locate numbers on a landmarked line.

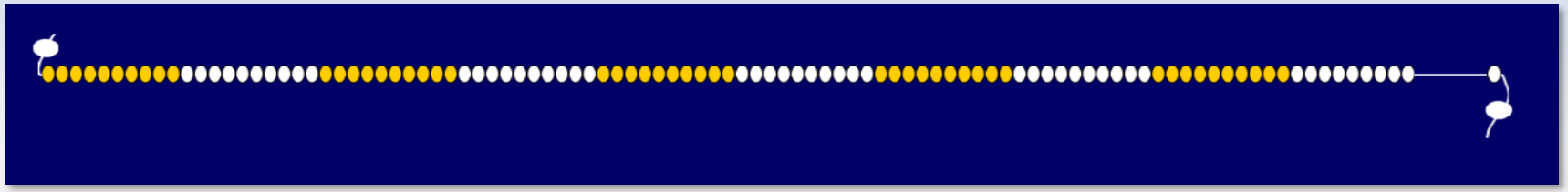


How many beads?

Use the place value cards to show your answer.

Day 2: Know what each digit means in a 2-digit number. Locate numbers on a beaded line. Compare numbers using the symbols < and >. Locate numbers on a landmarked line.

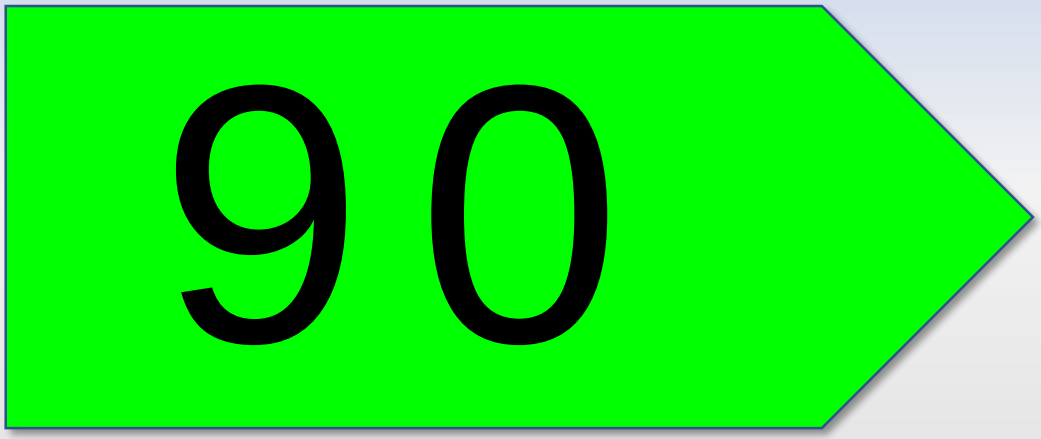
Day 2: Know what each digit means in a 2-digit number. Locate numbers on a beaded line. Compare numbers using the symbols < and >. Locate numbers on a landmarked line.



How many beads?

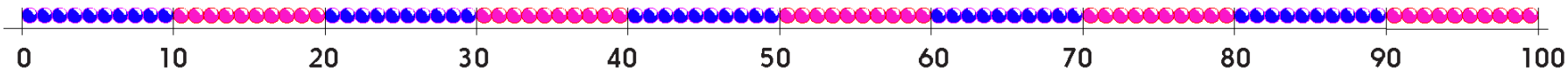
Use the place value cards to show your answer.

Day 2: Know what each digit means in a 2-digit number. Locate numbers on a beaded line. Compare numbers using the symbols < and >. Locate numbers on a landmarked line.



Find the numbers

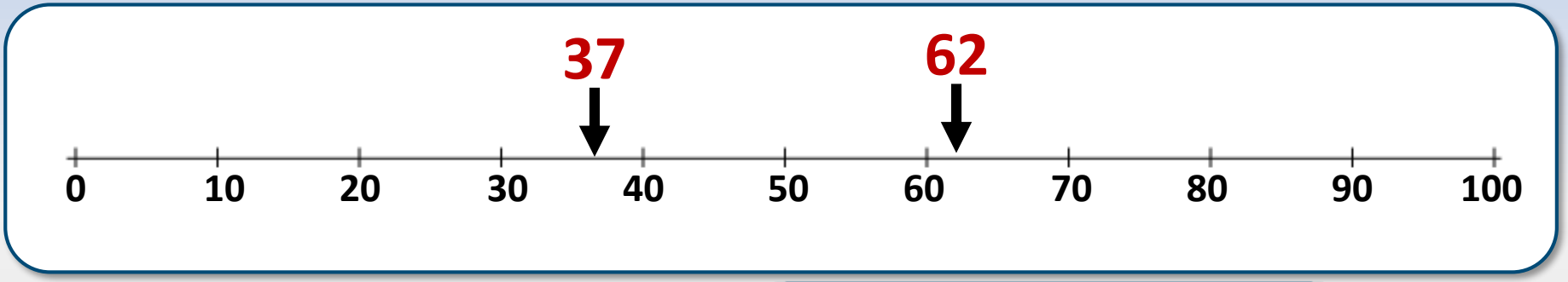
Sheet 1



Mark these numbers on the line:

23 58 75 12 61 83 88 24 32 47

Day 2: Compare numbers using the symbols < and >. Locate numbers on a landmarked line.



62 > 37

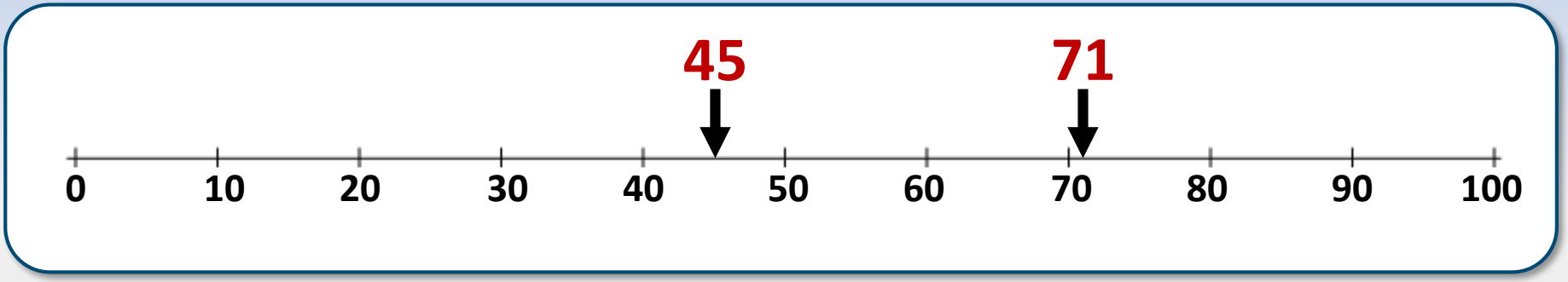
Sho[illegible] and 62 go on this line.
How do you know?

62 is greater than 37. Remind children that the 'crocodile's mouth' is open towards the bigger number!

We can also write 37 < 62.
37 is less than 62.

Tell me a number that is between 37 and 62.
How do you know?

Day 2: Compare numbers using the symbols < and >. Locate numbers on a landmarked line.



71 > 45

re 45 and 71 go on the line. How do you kno

71 is greater than 45.

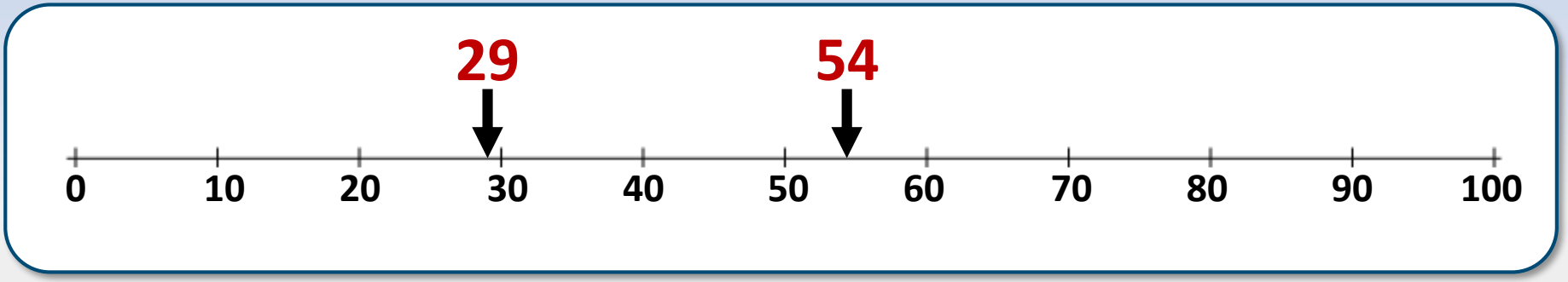
bigger?

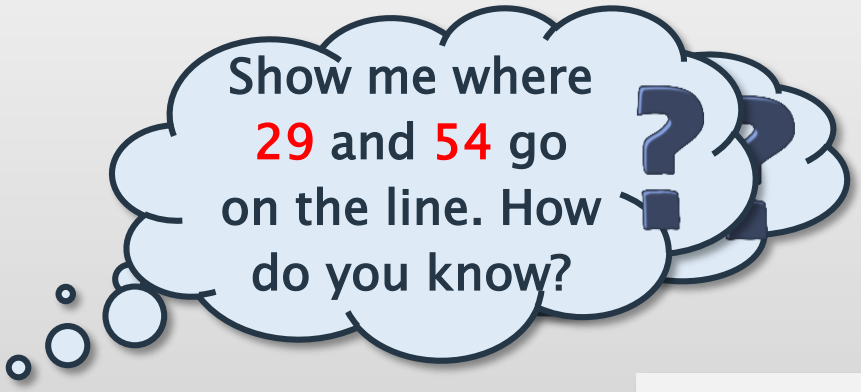
45 < 71

What else could we write?

45 is less than 71.

Day 2: Compare numbers using the symbols < and >. Locate numbers on a landmarked line.



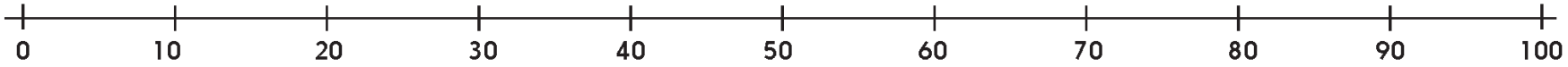


54 > 29

29 < 54

Finding inequalities

Sheet 4



Mark the numbers on the landmarked line and complete the table.

Suggest some more of your own for the last four rows.

Number to mark on beaded line	My number is more than >	My number is less than <	My number lies between these multiples of 10:
62	62 > 52	62 < 65	60 and 70
57			
14			
81			
45			
26			
73			
39			
98			
	☐ > 76	☐ < 83	
			110 and 120

Challenge

Place Value and Number

2-digit place value

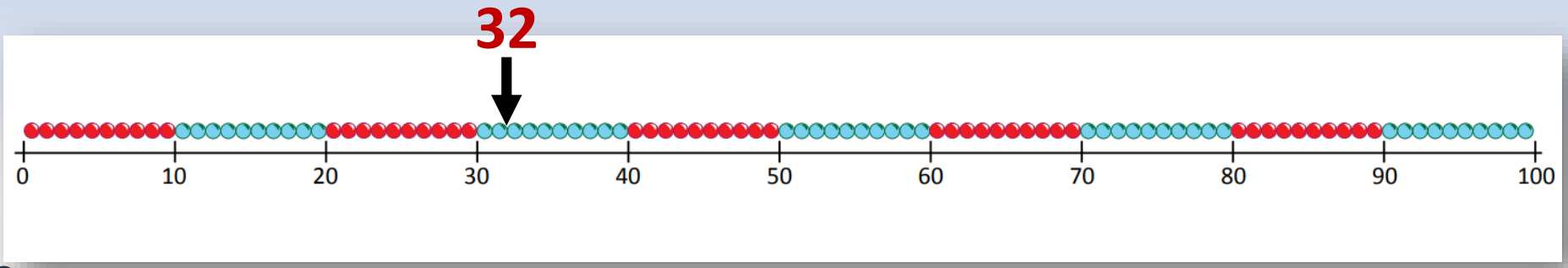
Objectives

Day 3

Place 2-digit numbers on a beaded line. Suggest a number between neighbouring multiples of 10.

Round 2-digit numbers to the nearest multiple of 10.

Day 3: Place 2-digit numbers on a beaded line. Suggest a number between neighbouring multiples of 10. Round 2-digit numbers to the nearest multiple of 10.

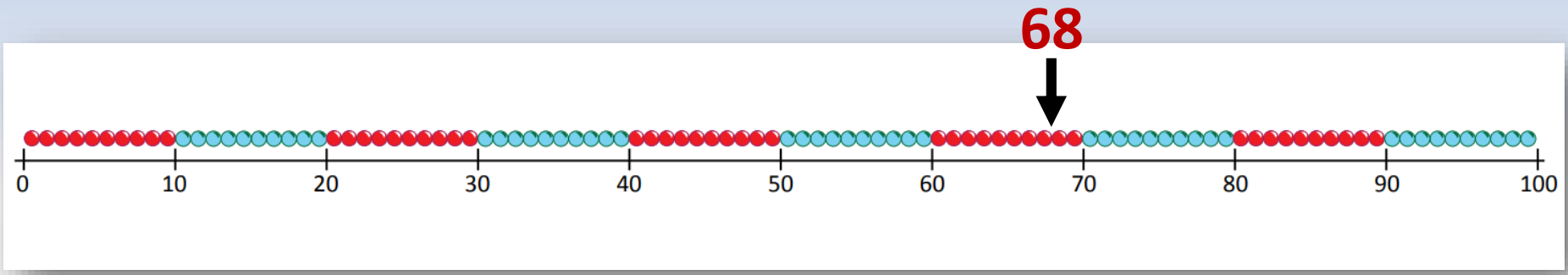


Where would 32 go on this line?
Is it nearer to 30 or 40?

To round 32 to the nearest 10 we round it 'down' to 30 because that's the closest multiple of 10.

If we were adding the prices of lots of toys, and just needed to know roughly how much the whole lot would be, we could round each price to the nearest £10 and then add them.

Day 3: Place 2-digit numbers on a beaded line. Suggest a number between neighbouring multiples of 10. Round 2-digit numbers to the nearest multiple of 10.

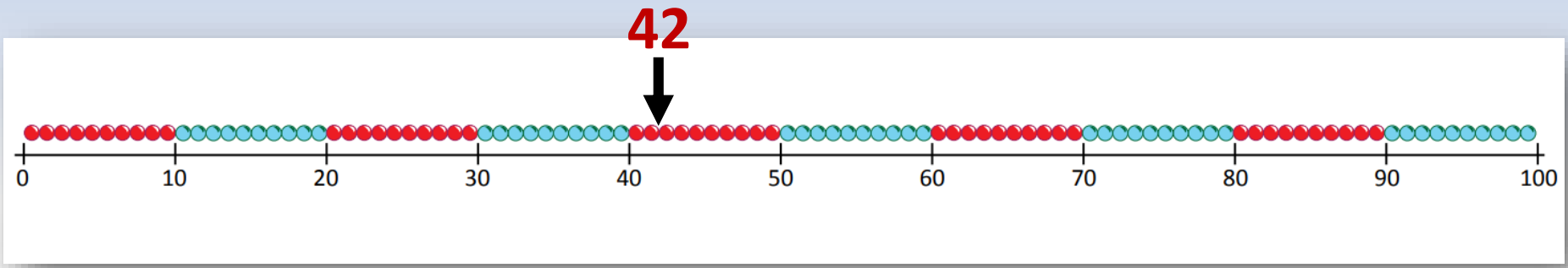


Y1 – Where would 68 go on this line?

Y2 – Is it nearer to 60 or 70?

To round 68 to the nearest 10 we round it 'up' to 70 because that's the closest multiple of 10.

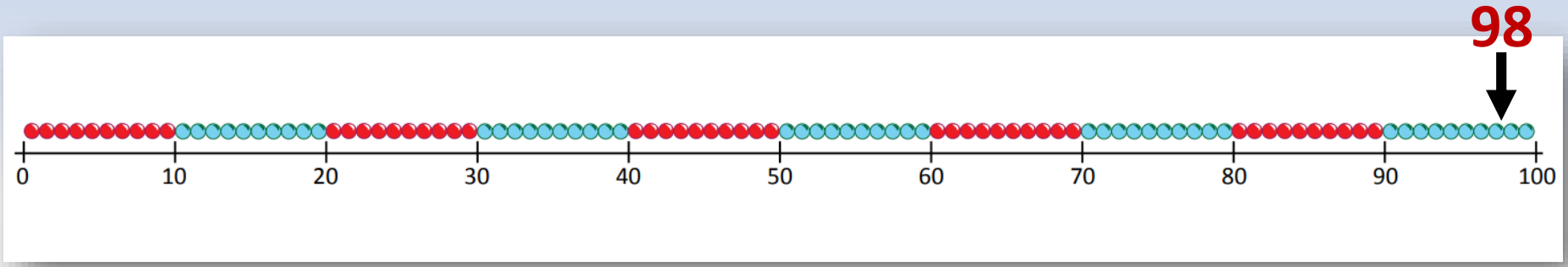
Day 3: Place 2-digit numbers on a beaded line. Suggest a number between neighbouring multiples of 10. Round 2-digit numbers to the nearest multiple of 10.



Y1 – Where would 42 go on this line?
Y2 – What is 42 rounded to the nearest 10?

To round 42 to the nearest 10 we round it down to 40 because that's the closest multiple of 10.

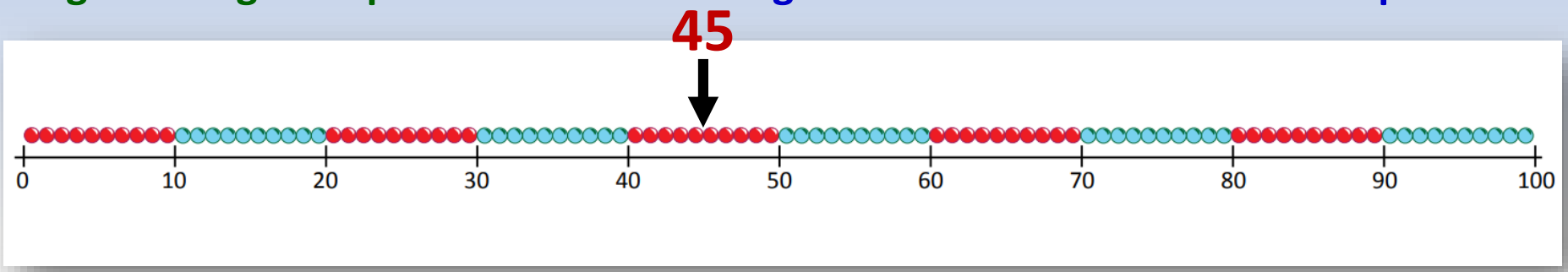
Day 3: Place 2-digit numbers on a beaded line. Suggest a number between neighbouring multiples of 10. Round 2-digit numbers to the nearest multiple of 10.



Where would 98 go? Round it to the nearest 10...

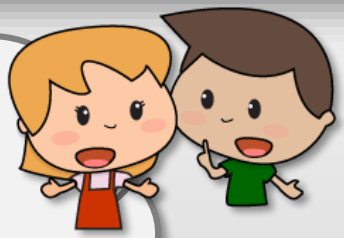
To round 98 to the nearest 10 we round it up to 100 because that's the closest multiple of 10.

Day 3: Place 2-digit numbers on a beaded line. Suggest a number between neighbouring multiples of 10. Round 2-digit numbers to the nearest multiple of 10.



Where would 45 go on this line?

Talk to your partner. What is 45 rounded to the nearest 10?



So, 45 is in the middle of 40 and 50. We need a rule for rounding numbers that are half-way between the target multiples.

We always round up.
45 rounded to the nearest 10 is 50.

Investigation: *Adult Sheet*

Square order

Children place four digit cards on a grid to create 2-digit numbers and order them. They move the digits around to make smaller/larger numbers.

Skills practised:

- Comparing and ordering 2-digit numbers
- Using knowledge about the value of each digit in a 2-digit number

***Conjecture**: It is possible to arrange four digit cards on a grid so as to create the four smallest 2-digit numbers possible and then the four largest 2-digit numbers possible.*

What to do:

Children work individually or in pairs
Children will need a set of 1 to 9 digit cards, Y2s need a 0 card for the challenge

1. Draw a 2 by 2 grid.
2. Choose four cards to place on the grid, e.g.

2	5
6	3

3. Read across the grid and write down the two 2-digit numbers, e.g. 25 and 63.
4. Read down the grid and write down the two 2-digit numbers, e.g. 26 and 53.
5. Write these numbers in order, smallest to largest, e.g. 25, 26, 53, 63.
6. Rearrange the four cards on the grid so as to get:
   - smallest possible set of numbers, including the smallest number possible at the start of the sequence
   - largest possible set of numbers, including the largest number possible at the end of the sequence

Can you DEMONSTRATE that your two sequences are the very smallest and the very largest possible?

Y2 CHALLENGE: Swap one of your cards with 0. If 0 is the first part of a 2-digit number, e.g. 03, read this as 3.
What is the smallest possible sequence of numbers now? Where is the best place to put 0? Does having a '0' in the pack affect the largest possible sequence or is it still the same as it was before?

Aim:

– To investigate if different possible answers can be found
– To realise the effect of placing digits in different places

Minimum number of calculations expected

N/A

Investigation: *Child Sheet*

1. Draw a 2 by 2 grid.

2. Choose four cards to place on the grid, e.g.

2	5
6	3

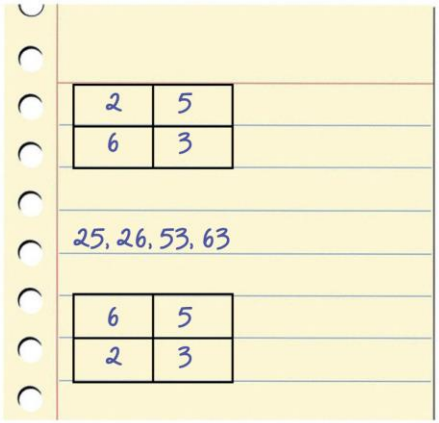
3. Read across the grid and write down the two 2-digit numbers, e.g. 25 and 63.

4. Read down the grid and write down the two 2-digit numbers, e.g. 26 and 53.

5. Write these numbers in order, smallest to largest, e.g. 25, 26, 53, 63.

6. Rearrange the four cards on the grid so as to get:

   - smallest possible set of numbers, including the smallest number possible at the start of the sequence
   - largest possible set of numbers, including the largest number possible at the end of the sequence



Can you DEMONSTRATE that your two sequences are the very smallest and the very largest possible?

Y2 Challenge

Swap one of your cards with 0. If 0 is the first part of a 2-digit number, e.g. 03, read this as 3. What is the smallest possible sequence of numbers now?
Where is the best place to put 0? Does having a '0' in the pack affect the largest possible sequence or is it still the same as it was before?

Rounding prices

Sheet 4

What multiple of 10p would you round each price to?

Book shop

33p

14p

56p

32p

29p

45p

Supermarket

53p

44p

58p

72p

99p

65p

81p

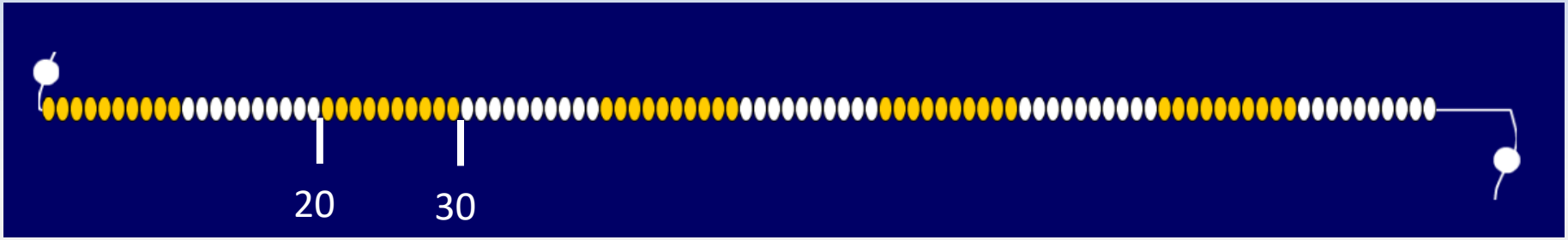
55p

97p

Challenge

Three items cost 24p, 13p and 34p.
Round them each to the nearest 10p then add the rounded numbers.
What is the difference between the total of the rounded prices and the total of the actual prices?

Day 3: Place 2-digit numbers on a beaded line. Suggest a number between neighbouring multiples of 10.

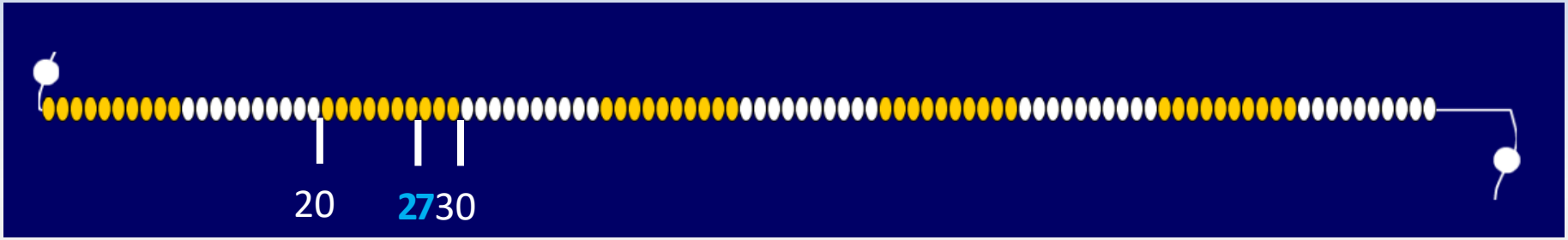


27

Show children a tag with 27 on it and ask which two whole tens it goes between on the bead bar.

It goes between 20 and 30.

Day 3: Place 2-digit numbers on a beaded line. Suggest a number between neighbouring multiples of 10.

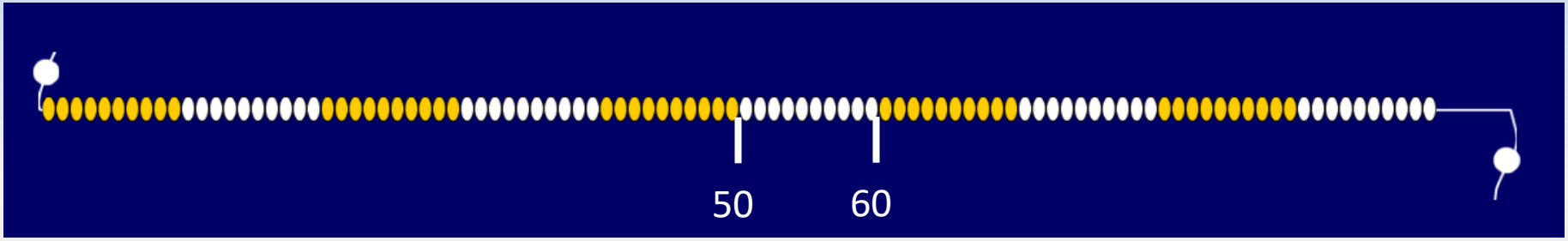


Where should it go?

27

Think of another number that goes between 20 and 30 and write it on your whiteboard.

Day 3: Place 2-digit numbers on a beaded line. Suggest a number between neighbouring multiples of 10.

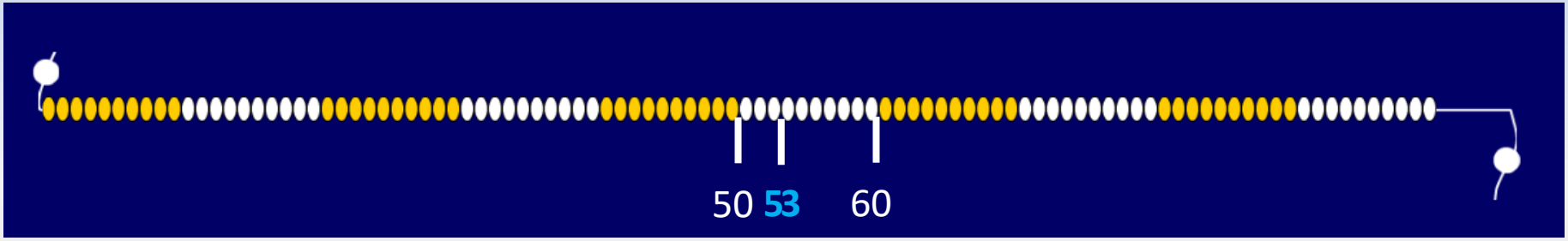


53

It goes between 50 and 60.

Show children a tag with 53 on it and ask which two whole tens it goes between on the bead bar.

Day 3: Place 2-digit numbers on a beaded line. Suggest a number between neighbouring multiples of 10.



Where should it go?

53

Think of another number that goes between 50 and 60 and write it on your whiteboard.

Investigation: *Adult Sheet*

Square order

Children place four digit cards on a grid to create 2-digit numbers and order them. They move the digits around to make smaller/larger numbers.

Skills practised:

- Comparing and ordering 2-digit numbers
- Using knowledge about the value of each digit in a 2-digit number

***Conjecture**: It is possible to arrange four digit cards on a grid so as to create the four smallest 2-digit numbers possible and then the four largest 2-digit numbers possible.*

What to do:

Children work individually or in pairs
Children will need a set of 1 to 9 digit cards, Y2s need a 0 card for the challenge

1. Draw a 2 by 2 grid.
2. Choose four cards to place on the grid, e.g.

2	5
6	3

3. Read across the grid and write down the two 2-digit numbers, e.g. 25 and 63.
4. Read down the grid and write down the two 2-digit numbers, e.g. 26 and 53.
5. Write these numbers in order, smallest to largest, e.g. 25, 26, 53, 63.
6. Rearrange the four cards on the grid so as to get:
   - smallest possible set of numbers, including the smallest number possible at the start of the sequence
   - largest possible set of numbers, including the largest number possible at the end of the sequence

Can you DEMONSTRATE that your two sequences are the very smallest and the very largest possible?

Y2 CHALLENGE: Swap one of your cards with 0. If 0 is the first part of a 2-digit number, e.g. 03, read this as 3.
What is the smallest possible sequence of numbers now? Where is the best place to put 0? Does having a '0' in the pack affect the largest possible sequence or is it still the same as it was before?

Aim:

– To investigate if different possible answers can be found
– To realise the effect of placing digits in different places

Minimum number of calculations expected

N/A

Investigation: *Child Sheet*

1. Draw a 2 by 2 grid.

2. Choose four cards to place on the grid, e.g.

2	5
6	3

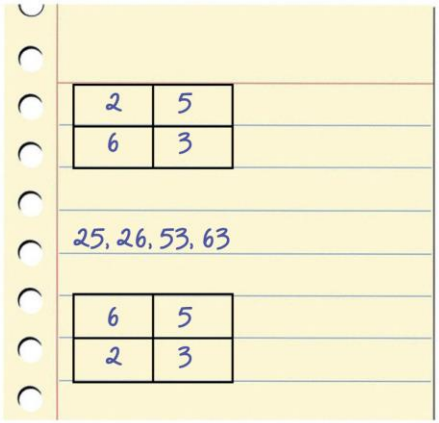
3. Read across the grid and write down the two 2-digit numbers, e.g. 25 and 63.

4. Read down the grid and write down the two 2-digit numbers, e.g. 26 and 53.

5. Write these numbers in order, smallest to largest, e.g. 25, 26, 53, 63.

6. Rearrange the four cards on the grid so as to get:

   - smallest possible set of numbers, including the smallest number possible at the start of the sequence
   - largest possible set of numbers, including the largest number possible at the end of the sequence



Can you DEMONSTRATE that your two sequences are the very smallest and the very largest possible?

Y2 Challenge

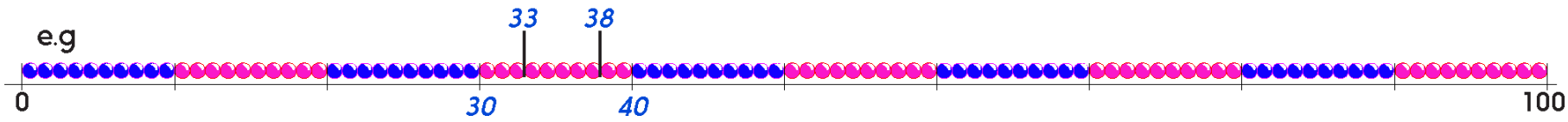
Swap one of your cards with 0. If 0 is the first part of a 2-digit number, e.g. 03, read this as 3. What is the smallest possible sequence of numbers now?
Where is the best place to put 0? Does having a '0' in the pack affect the largest possible sequence or is it still the same as it was before?

In between numbers

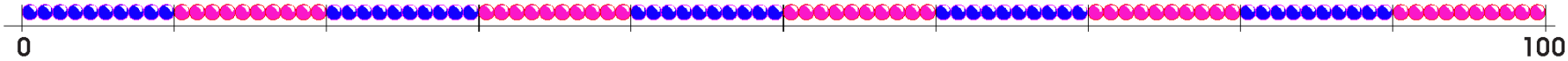
Sheet 2

Find the two 10s numbers on each beaded line. Write them in the correct place.
Mark two numbers between them.

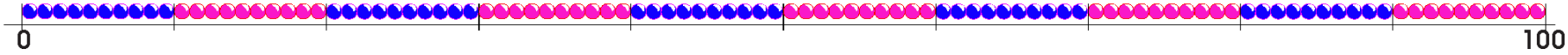
e.g



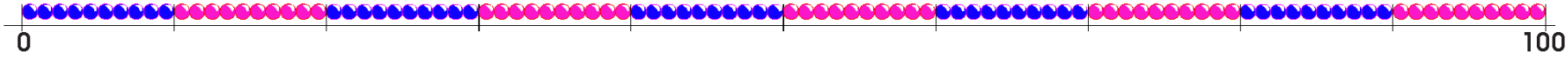
30 and 40.



60 and 70.



80 and 90.



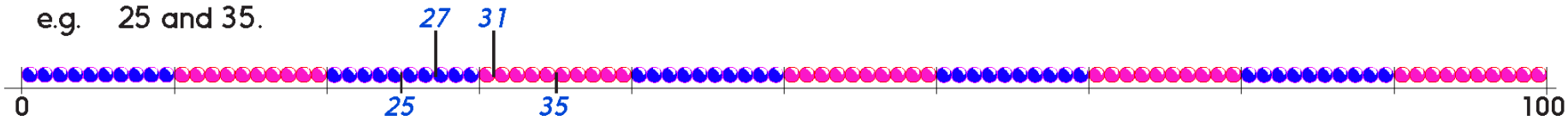
40 and 50.

In-between numbers

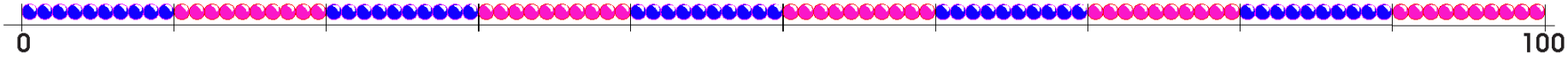
Sheet 3

Find the two numbers on each beaded line. Write them in the correct place.
Mark two numbers between them.

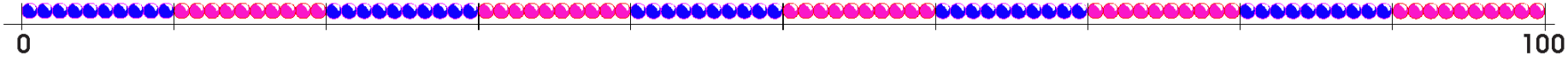
e.g. 25 and 35.



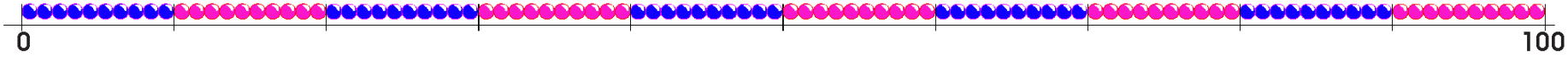
55 and 65.



88 and 98.



36 and 46.



Place Value and Number

2-digit place value

Well Done! You've completed this unit.

Objectives

Day 1

Know what each digit means in a 2-digit number.

Know what each digit means in a 2-digit number.

Day 2

Know what each digit means in a 2-digit number. Locate numbers on a beaded line.

Compare numbers using the symbols < and >. Locate numbers on a landmarked line.

Day 3

Place 2-digit numbers on a beaded line. Suggest a number between neighbouring multiples of 10.

Round 2-digit numbers to the nearest multiple of 10.

Problem solving and reasoning questions

Year 1

Use place value cards to create these numbers:

46 72 81 18

Circle the number in each pair with the most 10s.

(a) 34 and 51

(b) 14 and 41

(c) 59 and 61

(d) 80 and 28

How many 10ps and 1ps in each amount?

10ps	1ps	
3	6	= 36p
4	8	= ☐p
☐	2	= 52p
7	☐	= 70p

Problem solving and reasoning questions

Year 2

Fill in the missing numbers.

49 = 9 + ☐ ☐ - 7 = 30 90 = 94 - ☐

Write the missing number or symbol: < or >.

87 ☐ 78 73 < ☐ 14 ☐ 41 39 ☐ 62

19 > ☐ > 14

Round these numbers/ amounts to the nearest tens number:

26 37 61 75 94 86 55

Write all the numbers that round to 60 as the nearest 10.

Problem solving and reasoning answers

Year 1

Use place value cards to create these numbers:

46 72 81 18 Check children use the correct 10s and 1s cards, e.g. 40 and 6 for 46, not 4 and 6.

Circle the number in each pair with the most 10s.

(a) 34 and 51

(b) 14 and 41

(c) 59 and 61

(d) 80 and 28

How many 10ps and 1ps in each amount?

10ps	1ps	
3	6	= 36p
4	8	= **48p**
5	2	= 52p
7	**0**	= 70p

Check with real 10p and 1p coins if children are struggling.

Problem solving and reasoning answers

Year 2

Fill in the missing numbers.

49 = 9 + **40** **37** - 7 = 30 90 = 94 – **4**

Write the missing number or symbol: < or >.

87 **>** 78 73 < Any number greater than 73

14 **<** 41 39 **<** 62 19 > 15, 16, 17 or 18 > 14

Round these numbers/ amounts to the nearest tens number:

26 **30** 37 **40** 61 **60** 75 **80**

94 **90** 86 **90** 55 **60**

Write all the numbers that round to 60 as the nearest 10.

55, 56, 57, 58, 59, 61, 62, 63, 64 There are 9 numbers.

Some children may mistakenly include 65 which rounds to 70.