Summer Block 4

Place value (within 100)

Small steps

Step 1	Count from 50 to 100
Step 2	Tens to 100
Step 3	Partition into tens and ones
Step 4	The number line to 100
Step 5	1 more, 1 less
Step 6	Compare numbers with the same number of tens
Step 7	Compare any two numbers

Count from 50 to 100

Notes and guidance

In this small step, children practise counting to 100, building on their knowledge of place value to 50 from the Spring term. They may have already explored counting within 100 in different ways through classroom routines or experiences at home.

Children explore oral counting of numbers 50 to 100, both forwards and backwards. Provide opportunities for them to hear the patterns in the sequence of numbers and to help them get used to the sound of the number names. They also explore counting quantities of objects and think about counting as a way of finding "how many?"

Use representations such as hundred squares to point to the numbers written in numerals while counting. This supports children to link the numeral to the sound of the number name.

Things to look out for

- Children may struggle to count when crossing a tens boundary, for example 59, 60, 61
- Children may confuse the pronunciation of the "teen" numbers with the "ty" numbers, for example fifteen and fifty.

Key questions

- What number comes after _____?
- What number comes before _____?
- Do you always need to start counting from 1?
- When you count from _____ to _____, will you say the number _____?
- Which number comes after 9/19/49/59/99?
- Which number comes before 50/60/70/80/90/100?
- Which numbers sound similar?

Possible sentence stems

- The number that comes after _____ is _____
- The number that comes before _____ is _____
- I want to count to _____, so I could start counting from _____
- I will/will not say the number _____ because ...

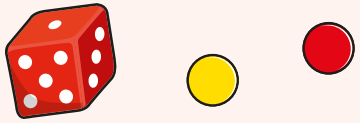
National Curriculum links

- Count to and across 100, forwards and backwards, beginning with zero or 1, or from any given number

Count from 50 to 100

Key learning

Provide children with hundred squares, dice and counters.



In pairs, children take turns to roll a dice and move a counter the corresponding numbers of spaces on a hundred square. Encourage children to say the number on each space as they move, not the number they have rolled on the dice. The aim of the game is to be the first to reach 100. Children could also start at 100 and race backwards to zero.

Read *One Is a Snail, Ten Is a Crab* by April Pulley Sayre and Jeff Sayre.

Ask children to select a creature, count the number of legs and place that number of counters on ten frames. The aim of the game is to be the first to 100

Encourage children to count on as they place their counters on their ten frames.

Say a starting number and ask children to count on from that number together. You could point up or down to indicate whether they need to count forwards or backwards.

To extend this activity, children could give you a starting number and you could make some deliberate mistakes for them to spot.

- Complete the number tracks.

52	53						

68	67				

	48	49			

77	78					

			71	72	

Count from 50 to 100

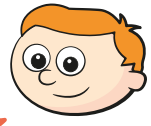
Reasoning and problem solving

Mrs Smith asks Jo, Ron and Tiny to count to 63, starting from 58

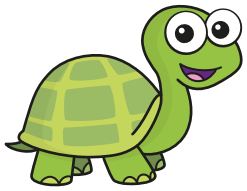
58, 59, 61, 62, 63

Jo

fifty-eight, fifty-nine, sixteen, sixty-one, sixty-two, sixty-three



Ron



63, 62, 61, 60, 59, 58

What mistakes have they made?

Jo: missed out 60

Ron: confused sixty with sixteen

Tiny: counted backwards, not forwards

Tom writes the numbers in a hundred square.

Help him to fill in the gaps.

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

How did you know which numbers to write?

hundred square completed correctly

Tens to 100

Notes and guidance

In this small step, children continue to develop their understanding of numbers to 100

Children begin by extending their knowledge of multiples of 10 from the Spring term to include 60, 70, 80, 90 and 100. They then explore the efficiency of counting in ones compared to grouping in tens. The use of practical equipment such as ten frames, base 10 and bead strings supports this. Provide children with a range of different practical experiences where they can explore counting by grouping in tens and counting by leaving items as ones. This lays the foundation and underpins children's understanding of tens and ones. It is crucial for future learning that they are provided with opportunities to explore and understand that 1 ten is equal to 10 ones.

Things to look out for

- Children may not see the equivalence between 10 ones and 1 ten.
- Children may rely on counting items individually as ones, rather than grouping objects into tens.

Key questions

- How can you show 1 one/10 ones?
- How can you show 1 ten?
- How many tens are there in _____?
- If you have 7 full ten frames, what number have you made?
- Is there more than one way to count the objects?
- What is the most efficient way to count the objects?

Possible sentence stems

- _____ ten frames are full, so I know that I have made _____
- There are _____ tens.

  This is equal to _____

  There are _____ more ones.

  The number is _____

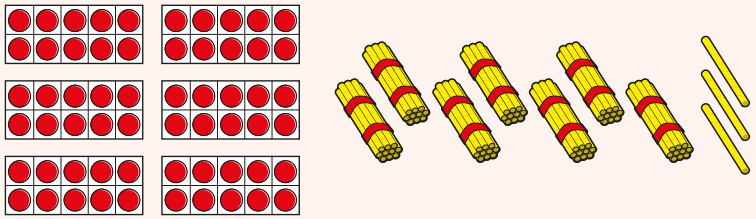
National Curriculum links

- Count to and across 100, forwards and backwards, beginning with zero or 1, or from any given number
- Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s

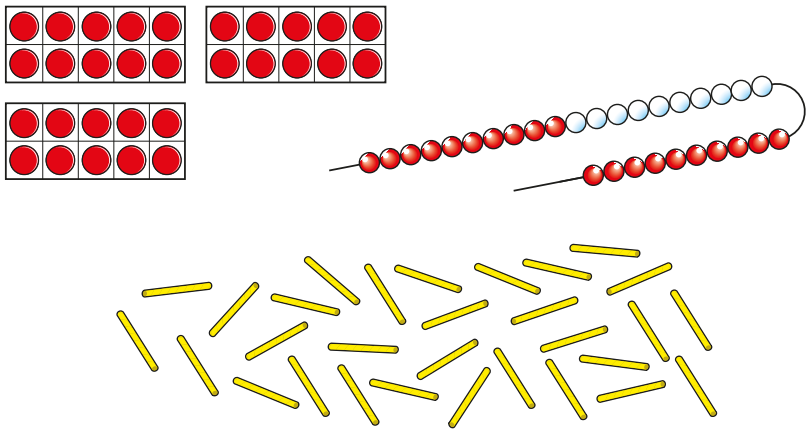
Tens to 100

Key learning

Show children representations of numbers, some of which show multiples of 10 and some that do not. Ask them to decide if the number shown is a multiple of 10 and to explain how they know.

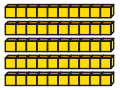
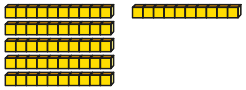
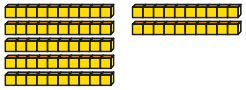


- What is the same? What is different?



Which is easiest to count? Why?

- Complete the table.

Base 10	Number	How many tens?
	50	
		6 tens
		
	80	
		9 tens
		

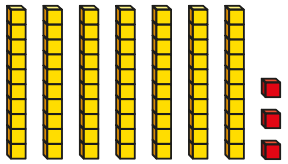
- Complete the sentences to match the base 10

There are _____ tens.

This is equal to _____

There are _____ more ones.

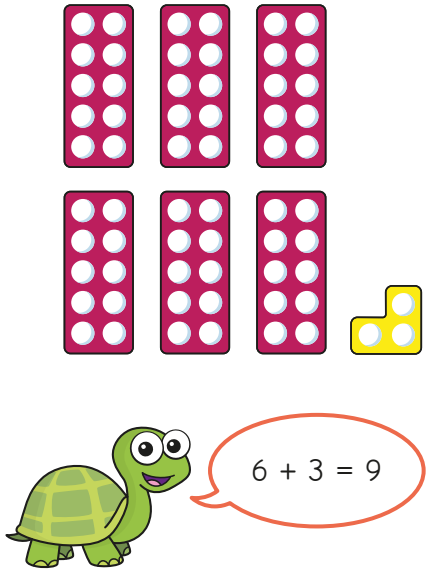
The number is _____



Tens to 100

Reasoning and problem solving

Tiny uses number pieces to make a number.



What mistake has Tiny made?

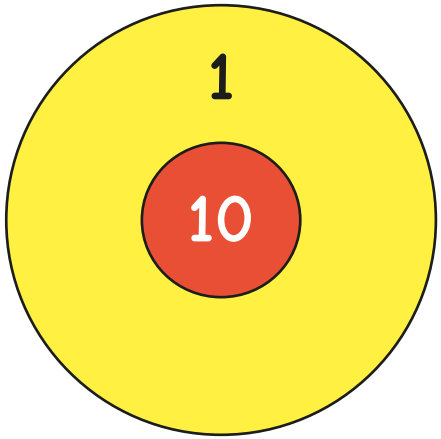
What number is shown?

How do you know?

63

6 tens and 3 more

Kay is playing a darts game.



She scores 10 points if the dart lands in the red zone.

She scores 1 point if the dart lands in the yellow zone.

Kay throws 9 darts.

How many points could she have scored?

9, 18, 27, 36, 45, 54, 63, 72, 81, 90

Partition into tens and ones

Notes and guidance

In this small step, children further develop their understanding of place value for 2-digit numbers from the Spring term, as they now partition numbers to 100

Children identify how many tens and how many ones make a number. They begin by investigating partitioning with concrete resources, such as base 10, followed by abstract numbers and other representations such as part-whole models. They need to recognise that it does not matter whether they record the tens part or the ones part first, as the whole remains the same.

Children explore the link between the number names, the digits used and the tens and ones structure to support their understanding of numbers up to 100

At this stage, children do not need to describe the part-whole model as an addition number sentence.

Things to look out for

- Children may partition the number into its digits, rather than considering the value of each digit, for example stating that 64 is made up of 6 and 4
- Children may find it confusing if the parts are shown in a non-standard order and may write that, for example, 2 and 80 are equal to 280 or 28 rather than 82

Key questions

- How many tens are there? How many ones are there? What is the number?
- What is the whole?
- What are the parts?
- Does it matter which way round the parts are?
- How does partitioning a number help you to read and write it?

Possible sentence stems

- There are _____ tens.
  There are _____ ones.
  The number is _____
- _____ is the whole.
  _____ is a part and _____ is a part.

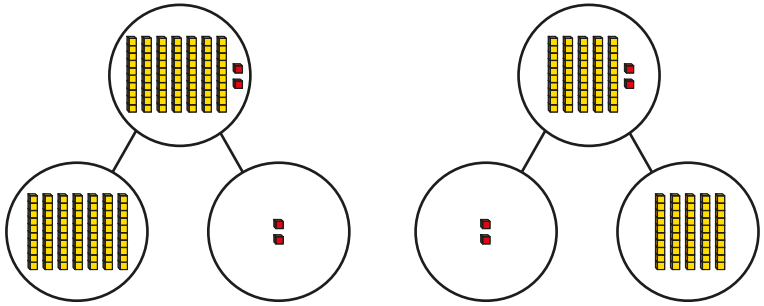
National Curriculum links

- Count to and across 100, forwards and backwards, beginning with zero or 1, or from any given number
- Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s

Partition into tens and ones

Key learning

- Complete the sentences for each part-whole model.

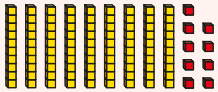


There are _____ tens.

There are _____ ones.

The number is _____

What is the same and what is different about the part-whole models?

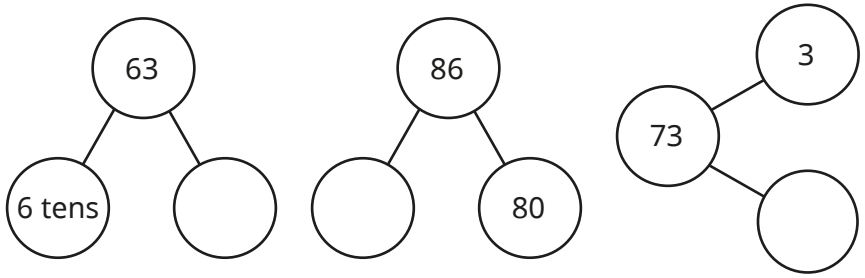


Provide children with 9 tens and 9 ones in base 10 and ask them to make a number using some of their base 10. They can then partition their number into tens and ones. Ask children to complete a part-whole model to show their number.

Read *Penguin Place Value* by Kathleen L Stone and ask questions about the book. How many fish have the penguins caught? How many groups of ten were there? How many extra ones are there?

Ask children to draw a part-whole model for the number of fish caught.

- Complete the part-whole models.



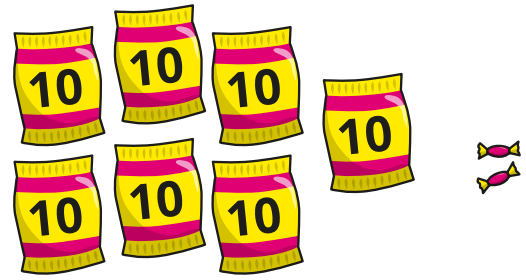
- Use part-whole models to partition the numbers into tens and ones.

54	94	87	61

Partition into tens and ones

Reasoning and problem solving

Tiny is working out how many sweets there are.



Do you agree with Tiny?

Explain your answer.

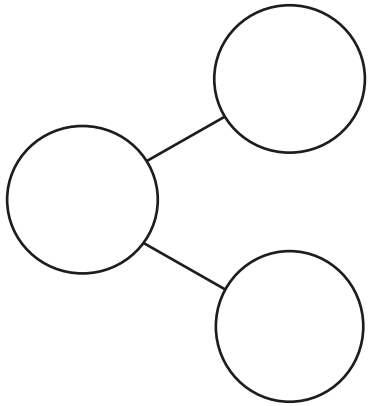
No

Here are four digit cards.

5	7	9	0

What 2-digit numbers can you make?

Use a part-whole model to partition each number.



50, 57, 59, 70, 75, 79, 90, 95, 97

multiple possible answers

The number line to 100

Notes and guidance

Children have previously encountered number lines to 10, 20 and 50. In this small step, this is extended to number lines up to 100

Children see examples of number lines with different start and end point values that have intervals in both 1s and 10s. They use their knowledge of counting both forwards and backwards to label number lines counting up in 1s, then in 10s. They identify missing values on a number line, as well as marking the positions of given numbers on unlabelled number lines.

Once they are confident with labelling and finding numbers on unlabelled number lines, children can progress to estimating the positions of numbers on blank number lines.

Things to look out for

- Children may struggle to label a number line if it crosses a multiple of 10
- Children may assume that all number lines start from zero or count in 1s.
- Children may label the intervals rather than the divisions.

Key questions

- What number comes after/before _____?
- What is the value of the start/end of the number line?
- How much is each jump on the number line? How do you know?
- What number is halfway along the number line?
- Should _____ be to the left or right of halfway? How do you know?
- Is _____ closer to _____ or _____?

Possible sentence stems

- I know the number line is going up in _____s because ...
- The number halfway along the number line is _____
- _____ is to the left/right of halfway.

National Curriculum links

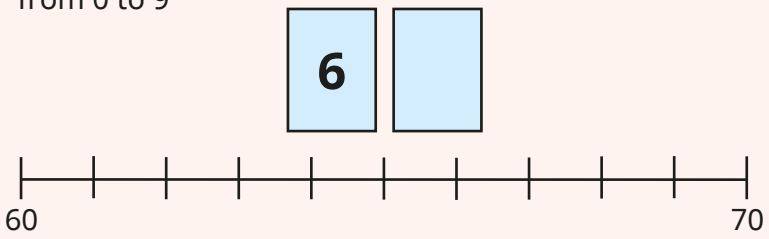
- Count to and across 100, forwards and backwards, beginning with zero or 1, or from any given number
- Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least

The number line to 100

Key learning

Use chalk to draw number lines with different start and end point values on the playground so that the number line is always counting in 1s. Children practise starting on a given number and hopping to another. Discuss which numbers they land on.

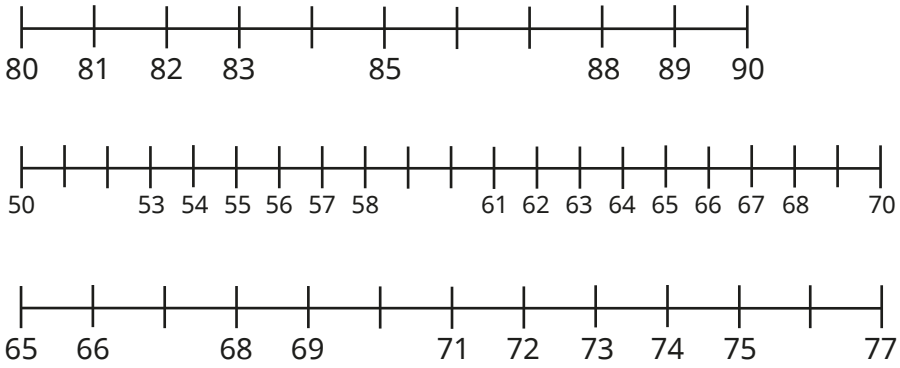
Provide children with a number line and digit cards from 0 to 9



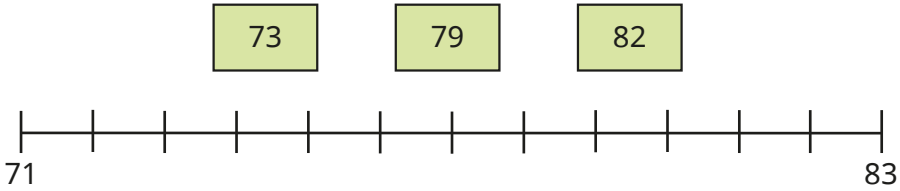
Children take turns to pick a digit card to complete the 2-digit number. They then write their number in the correct position on the number line.

This could be extended to number lines with different start and end point values for example 54 to 66, to see if there are other 2-digit numbers that could be made using the digit cards.

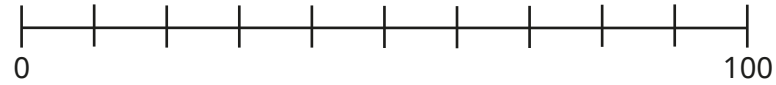
- Complete the number lines.



- Draw arrows to show where the numbers belong on the number line.



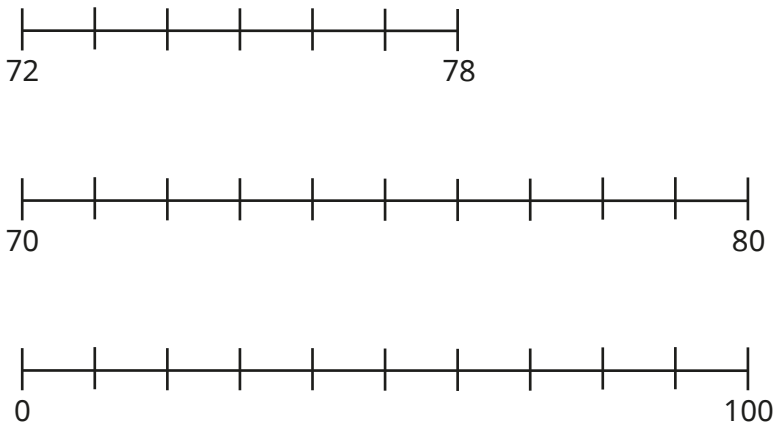
- Complete the number line.



The number line to 100

Reasoning and problem solving

Label 75 on each number line.



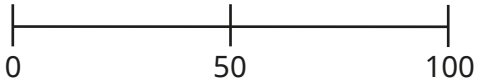
Which number line was easiest to label?

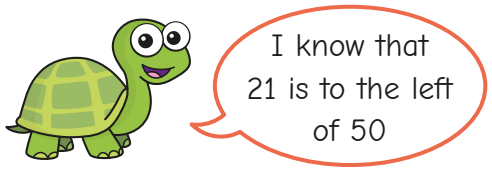
Which number line was hardest to label?

75 accurately marked on each number line

Tiny estimates where the numbers belong on the number line.

21	53	94	48





Explain why Tiny is correct.

Write **left** or **right** to complete the sentences.

53 is to the _____ of 50

94 is to the _____ of 50

48 is to the _____ of 50

right

right

left

1 more, 1 less

Notes and guidance

In this small step, children revisit the concept of 1 more and 1 less. They explore this in the context of numbers from 50 to 100 by applying the counting skills developed earlier in the block.

To support children in understanding the meaning of the words "more" and "less", provide opportunities for them to hear and use these words in context, for example "Please pass me 1 more pen." They need to know that 1 more is the number after the given number, and 1 less is the number before the given number.

Base 10, hundred squares and number lines can be useful representations to support children in exploring this concept.

Things to look out for

- Children can find counting backwards more challenging and miss out numbers or say them in the wrong order.
- Children may struggle to identify 1 more or 1 less when the number crosses a multiple of 10
- When using base 10, children may add or remove a ten rather than a one piece. As a result, they find 10 more or less rather than 1 more or less.

Key questions

- How can you show the number_____?
- What does 1 more/less mean?
- How can you find 1 more/less?
- How can you use a number line to find 1 more/less?
- How does this change the number? What digit(s) change?
- Is it only ever the ones digit that changes?

Possible sentence stems

- 1 more than _____ is _____
- 1 less than _____ is _____
- _____ is 1 more than _____
- _____ is 1 less than _____

National Curriculum links

- Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least

1 more, 1 less

Key learning

Choose a number. On a hundred square, remove or cover up the numbers before and after your number. Ask children to tell you 1 more and 1 less than your number.

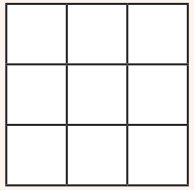
Ask children to build different 2-digit numbers using base 10. They then explore how to use the base 10 to find 1 more or 1 less than their starting number. Discuss what happens if their number has 9 ones and they find 1 more, or zero ones and they find 1 less.

Provide children with a selection of digit cards.

7	5	9	6

Children choose two cards to make a 2-digit number. Ask them what is 1 more and 1 less than their number. Discuss which digit(s) change.

Provide children with a 3 × 3 grid to play "1 more, 1 less bingo".



Ask children to put a number between 50 and 100 in each box.

Call out numbers between 50 and 100. Children can only cross out a number on their grid if it is 1 more or 1 less than the number called out.

- Part of a hundred square has been cut out.

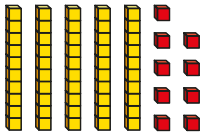
		37			
	46	47			
55		57			
65					

Fill in the missing numbers.

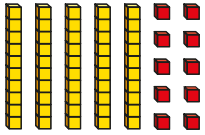
1 more, 1 less

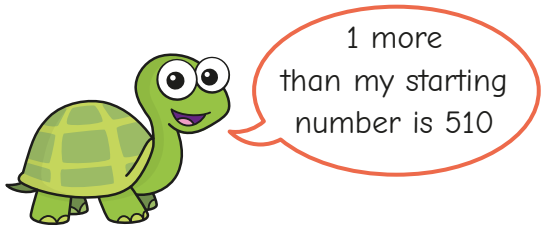
Reasoning and problem solving

Tiny uses base 10 to make a number.



Tiny makes 1 more than the number.





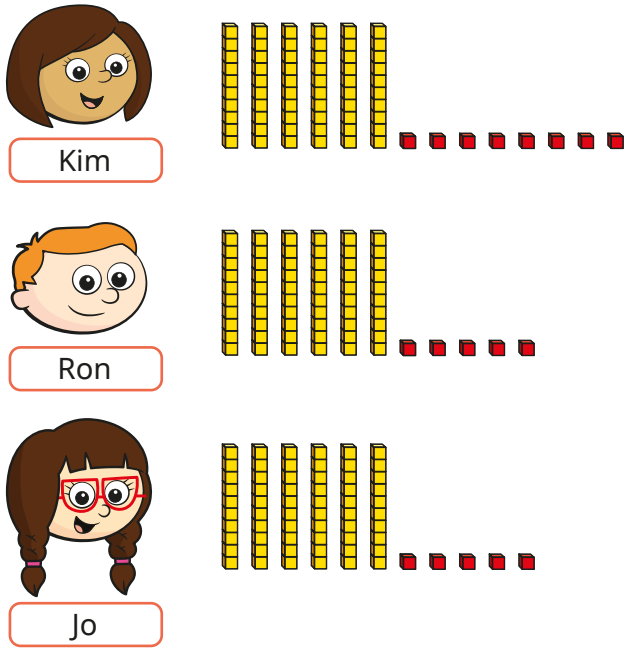
60

What mistake has Tiny made?

Use base 10 to find 1 more than 59

Move 2 ones to make the statements correct.

- Ron has 1 more than Kim
- Jo has 1 less than Kim



Move 2 ones from Kim and give them to Ron.

Compare numbers with the same number of tens

Notes and guidance

In this small step, children build on their learning from earlier in the year to compare numbers within 100. In previous blocks, children were introduced to the terms "greater than", "less than" and "equal to" alongside the corresponding inequality symbols >, < and =.

Children will need to practise using the words "fewer" and "less" accurately. Fewer is used when talking about a number of objects, whereas less is used when talking about values.

Children use their understanding of the values of the digits in a 2-digit number to compare numbers with the same number of tens but a different number of ones. Encourage them to notice that when the tens digit is the same, they only need to compare the number of ones to decide which number is greater.

Key questions

- How can you use base 10 to show the numbers?
- How many tens does each number have?
  How many ones does each number have?
- Is _____ greater/less than _____? How do you know?
- How can a number line help you to compare numbers?

Possible sentence stems

- _____ is equal to _____ tens and _____ ones.
- _____ tens is _____ to _____ tens.
  _____ ones is greater/less than _____ ones.
  So _____ is greater/less than _____
- _____ is greater/less than _____ because ...

Things to look out for

- Children may confuse the inequality signs.
- Children may confuse the values of the ones digit and the tens digit.

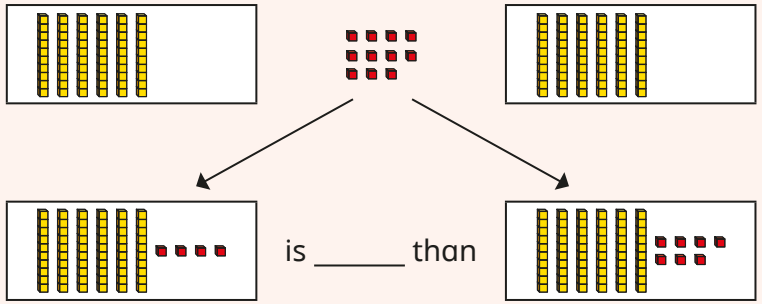
National Curriculum links

- Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least

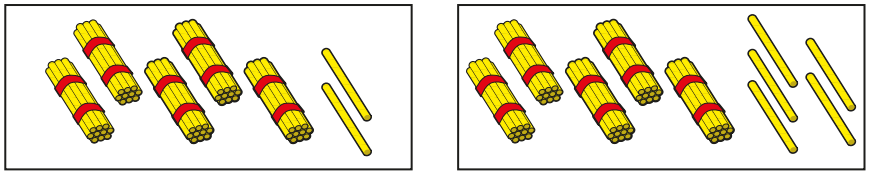
Compare numbers with the same number of tens

Key learning

Provide pairs of children with the same number of tens each. Then give them between 1 and 18 ones to share. Ask them to split their ones to make two 2-digit numbers. They can then compare their numbers, completing the sentence using "greater" or "less".



- Complete the sentences to compare the numbers.

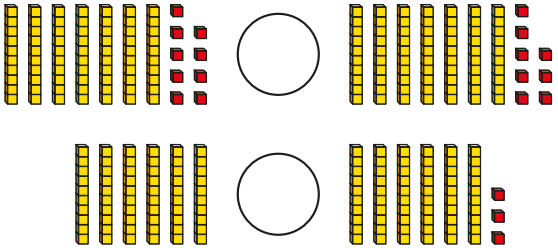


There are _____ tens in each number.

2 ones is _____ than 5 ones.

So 52 is _____ than 55

- Write < or > to compare the numbers.



- Write <, > or = to compare the numbers.

58 ◯ 55

93 ◯ 97

80 ◯ 8 tens

- Complete the statements.

80 < 8__ | 75 > 7__ | 66 < 6__

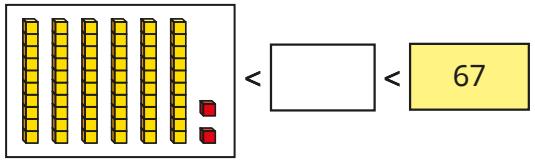
51 > 5__ | 98 < 9__

Is there more than one way to complete any of the statements?

Compare numbers with the same number of tens

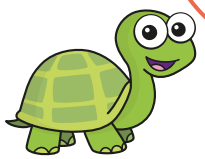
Reasoning and problem solving

What could the missing number be?



Is there more than one answer?

63, 64, 65, 66



Do you agree with Tiny?

Explain your answer.

Yes

Here are some digit cards.

4	0	7	5

Ron and Mo each choose a digit card to make a 2-digit number.

Ron

8	

Mo

8	

Ron's number is greater than Mo's number.

What numbers could they have made?

How many answers can you find?

six possible combinations:

87 and 85/84/80

85 and 84/80

84 and 80

Compare any two numbers

Notes and guidance

In this small step, children build on their learning from the previous step to compare any two numbers.

To begin with, children compare multiples of 10. They then use their understanding of the value of the digits in a 2-digit number to firstly compare two numbers with the same number of ones and different tens, before comparing two numbers with different numbers of tens and ones. They use their knowledge of partitioning to support them in this. It is important for children to explore a range of concrete resources to make comparisons more visual.

Children use the terms "greater than", "less than" and "equal to" alongside the corresponding inequality symbols >, < and =. It is important that they have the opportunity to use all the symbols, in order to reinforce the meaning of each one.

Things to look out for

- Children may confuse the inequality symbols.
- Children may confuse the values of the ones digit and the tens digit.
- Children may compare numbers by only looking at either the ones digit or the tens digit.

Key questions

- Which is greater, 7 tens or 3 tens/70 or 30? How do you know?
- How can you make both numbers using base 10?
- Which number has more/fewer tens?
- Which number has more/fewer ones?
- Which number is greater? How do you know?
- Why is it important to look at the tens before the ones?

Possible sentence stems

- _____ tens are greater/less than _____ tens.
- When I compare numbers, I need to compare the _____ first.
- _____ is equal to _____ tens and _____ ones.
- _____ is greater/less than _____ because ...

National Curriculum links

- Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least

Compare any two numbers

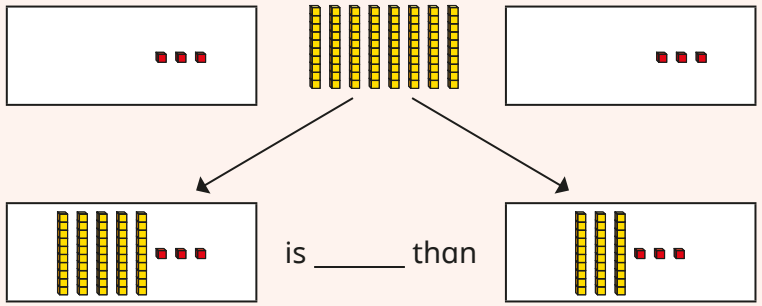
Key learning

- Write **greater** or **less** to complete the sentences.

  Use base 10 to help you.

  - 7 tens is _____ than 4 tens
  - 2 tens is _____ than 9 tens.
  - 80 is _____ than 30

Provide pairs of children with the same number of ones each. Then give them between 1 and 18 tens to share. Ask them to split the tens to make two 2-digit numbers. They can then compare their numbers, completing the sentence using "greater" or "less".

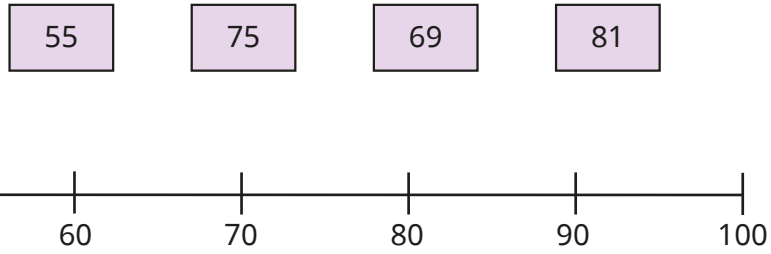


What do they notice?

Put children into pairs. Each child needs base 10 and two 0–9 dice.

Both children roll their dice to make a 2-digit number. The first dice gives the number of tens and the second dice the number of ones. Children then use base 10 to build their numbers and compare them using the inequality symbols.

- Estimate where the numbers belong on the number line.



Write < , > or = to compare the numbers.

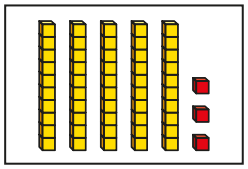
55 ◯ 75 69 ◯ 75

75 ◯ 81 81 ◯ 69

Compare any two numbers

Reasoning and problem solving

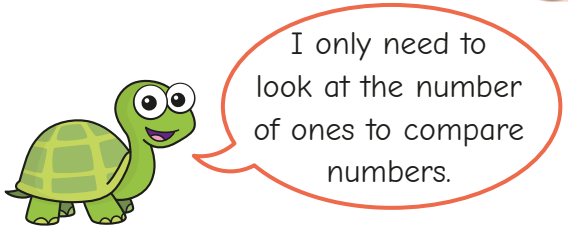
What could the missing number be?

 > ☐ > 7 ones and 4 tens

How many possible answers can you find?

48, 49, 50, 51 or 52 either written, drawn or built

Tiny is comparing numbers.



Do you agree with Tiny?

Explain your answer.

No

Use the numbers to complete the statements.

63	45	24	99

You can use each number only once.

☐ < ☐ ☐ > ☐

How many answers can you find?

multiple possible answers, e.g.

63 < 99 45 > 24

45 < 63 99 > 24

Here are some digit cards.

1	3	5	6

Use the digit cards to make the statement correct.

☐☐ < ☐☐

How many answers can you find?

multiple possible answers, e.g.

31 < 65

Summer Block 5

Money

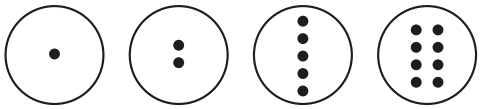
Small steps

Step 1	Unitising
Step 2	Recognise coins
Step 3	Recognise notes
Step 4	Count in coins

Unitising

Notes and guidance

In this small step, children are introduced to the idea that groups containing or representing the same number of things can be treated as ones. For example a 5 pence coin represents five 1 pence coins. One item does not need to represent a value of one – this is called "unitising".



Pre-money counters are used in this step to support children's understanding. These counters are all the same size and colour and have dots on one side to represent their value. This helps children to see the value (cardinality) before they move on to coins where the value is not shown as a visual. By using objects that are the same size and colour, the focus is on exploring the different values that one counter can represent. This supports children to then understand that the value of coins is independent of size, shape, mass or colour.

Things to look out for

- Children may not recognise that one item can have a value greater than 1. A pre-money counter with 5 dots has the same value as five pre-money counters with 1 dot.

Key questions

- How many dots are there on the counter?
- What is the value of the counter?
- How can you use counters to represent the value of the coin?
- How can you use coins to match the value of your counters?
- What is the same? What is different?
- What do you notice?

Possible sentence stems

- There are _____ dots.
  The counter has a value of _____
- The _____ has a value of _____
- This is a _____ pence coin.
  It has a value of _____

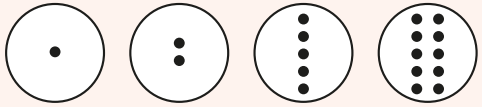
National Curriculum links

- Recognise and know the value of different denominations of coins and notes

Unitising

Key learning

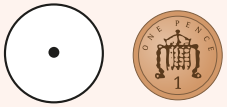
Give children a range of different pre-money counters to explore.



Discuss what is the same and what is different.

How many 1/2/5 counters have the same value as a 10 counter?

Show children a pre-money counter with a value of 1. Now show them a 1 pence coin. Explain that both have a value of 1

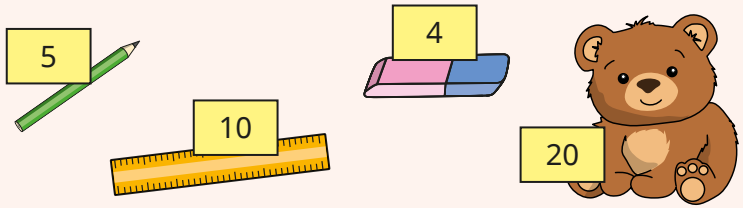


Show children two 1 pence coins. Ask them to represent the coins using pre-money counters. How many counters will they need? Why?

Repeat with 2, 5 and 10 pre-money counters and coins.

- Match the coins to the counters.

Set up a role-play shop and provide children with pre-money counters.



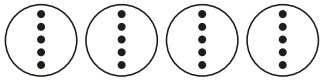
Can children show the correct value of pre-money counters for each item?

Is there more than one way to do it?

Unitising

Reasoning and problem solving

Match the counters to the coins.

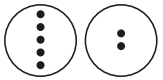


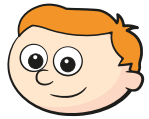
What other counters can you use to match the value of each coin?

Compare answers with a partner.

Jo and Ron have some counters.

Jo





Ron

Whose counters have a greater total value?

Explain your answer.

Mo also has some counters.

His counters are worth more than Jo's but less than Ron's.

What counters could Mo have?

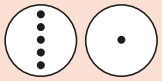
five 2 counters matched to 10 pence

five 10 counters matched to 50 pence

four 5 counters matched to 20 pence

Ron

multiple possible answers to make a total of 6, e.g.



Recognise coins

Notes and guidance

In this small step, children formally explore coins for the first time. In the previous step, they identified the value of different counters and began to transfer that understanding to coins. They continue to explore and recognise the value of different denominations of coins.

Discuss equivalence, showing children that a 20p coin is equivalent to twenty 1p coins and also two 10p coins. This helps them to see why we unitise and use coins with different values rather than using single pennies for everything.

Once children are confident with recognising pence, introduce the £1 and £2 coins, explaining that they have a greater value than pence. Although children do not need to formally convert pounds to pence, it may be useful for them to see that £1 is equivalent to 100p. At this stage, children do not need to be introduced to the notation £ and p, as this is covered explicitly in Year 2

Things to look out for

- Children may confuse pounds with pence, for example identifying a £2 coin as 2 pence because "two" is written on the face.

Key questions

- What is the value of the coin? How do you know?
- What is the same and what is different about the coins?
- Which coin has the greater value? How do you know?
- What other coins have the same value as one _____ pence coin?
- How have you sorted your coins?
- How can you order the coins?

Possible sentence stems

- There are _____ 1 pence coins.
  The total value is _____
- This is a _____ pence coin.
  It has the same value as _____ 1 pence coins.
- I know that these coins are pounds/pence because ...

National Curriculum links

- Recognise and know the value of different denominations of coins and notes

Recognise coins

Key learning

Hide a selection of 1p, 2p, 5p and 10p coins and pre-money counters up to the value of 10 around the classroom. Ask children to find matching pairs.

Give children a range of different coins to explore. Are they able to recognise and name each coin?

Ask children to sort the coins. Which are pounds and which are pence? How do they know?

Read *The Great Pet Sale* by Mick Inkpen.

Set up a role-play pet shop. Use a range of toy animals and label them with different price tags: 1 pence, 2 pence, 5 pence, 10 pence, 20 pence, 50 pence,1 pound and 2 pounds.

50 pence

Encourage children to use only one coin to buy a pet.

- Match each coin to its value.




2 pounds	1 pence	2 pence	1 pound

- Complete the sentences.

There are _____ 1 pence coins.

There are _____ 10 pence coins.

There are _____ 1 pound coins.

Provide pairs of children with a set of 1p, 2p, 5p, 10p, 20p, 50p, £1 and £2 coins. Ask them to order the coins by size, from smallest to largest. Then ask them to order the coins by value, from smallest to greatest.

What do they notice?

Recognise coins

Reasoning and problem solving

Max has a coin.

- It is not the smallest in size.
- It is not the greatest in value.
- It is silver.
- It is circular.

Can you work out which coin is Max's?

How do you know?

Choose a coin and make clues for a partner to guess your coin.

10 pence

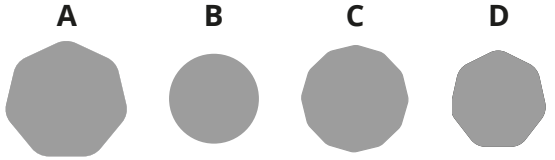
Which is the odd one out?

20 pence	8 pence
2 pence	10 pence

Explain your answer.

8 pence

Kay's coins are making shadows.



Which coins could Kay have?

Which coins could Kay **not** have?

A: 50p

B: 5p

C: £1

D: 20p

Recognise notes

Notes and guidance

In this step, children further develop their understanding of money by recognising and investigating the value of notes.

Children use their understanding of place value to compare the value of different notes, for example recognising that a £20 note has a greater value than a £5 note because 20 > 5. They recognise that the larger the size of the note, the higher the value.

Children explore how one note can have the value of many coins and/or notes. For example, a £10 note has the same value as two £5 notes or five £2 coins or ten £1 coins. Discuss why we use notes as well as coins.

Children are less likely to have encountered a £50 note, as these are much less common in everyday life.

Things to look out for

- When there are multiple notes, for example, three £5 notes compared to one £10 note, children may believe that the £10 note has a higher value, because it is larger in size than the £5 notes.
- Children may confuse pounds with pence.

Key questions

- What is this note?
- What is the same about each note?
- What is different about each note?
- Which note has the highest value? How do you know?
- Which note has the lowest value? How do you know?
- How many _____ pound notes are equal to a _____ pound note?

Possible sentence stems

- One _____ pound note is equal to _____ pound notes/coins.
- I know that a _____ pound note has a higher value than a _____ pound note because ...
- A _____ pound note has the same value as _____ 1 pound coins.

National Curriculum links

- Recognise and know the value of different denominations of coins and notes

Recognise notes

Key learning

Scatter some £5, £10, £20 and £50 notes on the floor.

Explain that some money has fallen out of your pocket. Ask children to identify and collect the notes, one value at a time. What is the value of each note?

Ask the class to imagine they are at the fair. To go on the rides, they must use 1 pound coins, but they only have a selection of notes. They need to change their notes into the correct number of 1 pound coins at the change booth.

Ask how many 1 pound coins they will get for a £5/£10/£20 note.

- Here are some notes.

Complete the sentence for each type of note.

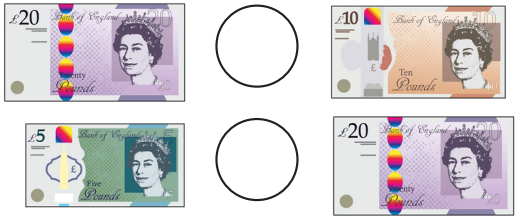
There are _____ 5 pound notes.

There are _____ 10 pound notes.

There are _____ 20 pound notes.

There are _____ 50 pound notes.

- Write <, > or = to compare the amounts.



- How many 5 pound notes are equal in value to one 10 pound note?
  How many £10 notes are equal in value to one 20 pound note?

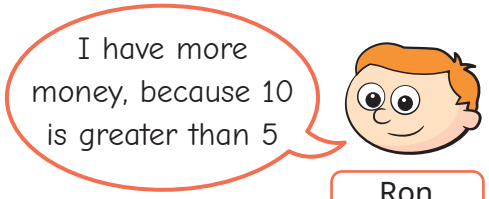
Recognise notes

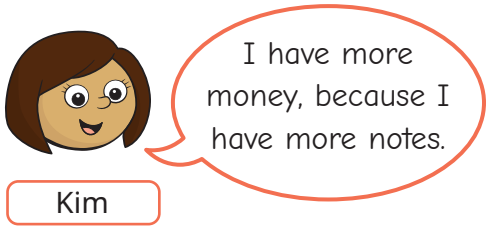
Reasoning and problem solving

Ron and Kim each have some money.

Ron's money 

Kim's money 





Who is correct?

Explain your answer.

Both children are incorrect.

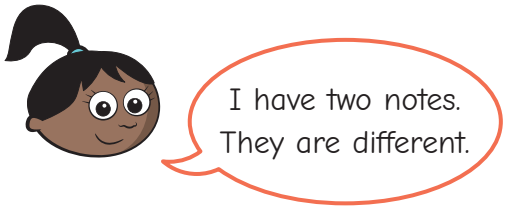
Is the statement always true, sometimes true or never true?

> Money in notes is worth more than money in coins.

Explain your answer.

sometimes true

Sam has got some money.



What notes could Sam have?

What is the value of the notes?

£5 note and £10 note; £15

£5 note and £20 note; £25

£10 note and £20 note; £30

Count in coins

Notes and guidance

In the previous small steps, children recognised and identified the value of coins and notes and saw how one note or coin could have the same value as a combination of a number of other notes or coins.

In this step, they use their knowledge of the values of coins to solve problems by counting in 2s, 5s and 10s. This allows children to count money more efficiently. Although they do not need to count in 20s or 50s, they will count on from them. For example, with a 20p coin and three 2p coins, they need to start at 20 and count on in 2s.

Encourage children to draw coins or representations to match a given amount and use previous learning to compare amounts of money.

Things to look out for

- Children may find it more difficult to work out total amounts when there are different denominations of coins rather than just one type of coin.
- When comparing sets of coins, children may believe that the greater number of coins has the greater value.

Key questions

- How can you count in 2s, 5s or 10s?
- How many coins are there?
  What is the value of each coin?
  What is the total amount?
- How can you use "greater than", "less than" or "equal to" to compare each set of coins?

Possible sentence stems

- The value of each coin is _____ pence, so I need to count in _____ s.
- There are _____ coins.

  Each coin has a value of _____ pence.

  The total amount is _____ pence.

National Curriculum links

- Recognise and know the value of different denominations of coins and notes
- Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s

Count in coins

Key learning

- Complete the number tracks to match the coins.

  What is the total value of coins in each set?

  ▶

2	4	6							

  ▶

5	10								

Set up a bus stop and have chairs in the positions of seats on a bus.

A ticket for the bus costs 20p.

Give each child a set of either 2p, 5p or 10p coins. Encourage them to count in 2s, 5s or 10s, depending on their coins, to pay for their bus ticket.

How many coins do they need?

How many coins would they need if they also bought a ticket for a friend?

- How much money is there?

  ▶ 

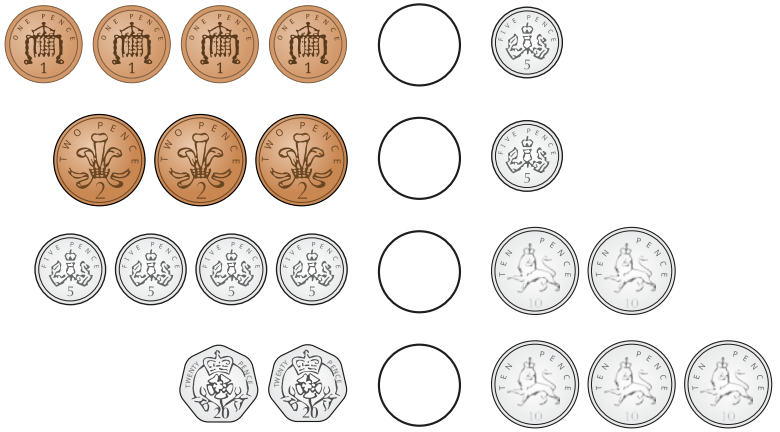
  ▶ 

  ▶ 

  ▶ 

  Which totals were easier to work out? Why?

- Write <, > or = to compare the amounts.



Count in coins

Reasoning and problem solving

Tom has 40 pence in his money box.

There is only one 10 pence coin.

All the other coins are the same.

They are all 1 pence, 2 pence or 5 pence coins.

How many of each coin might there be?

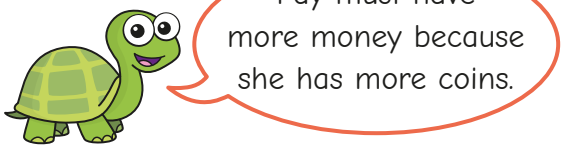
thirty 1 pence coins

fifteen 2 pence coins

six 5 pence coins

Fay has 3 of the same type of coin in her hand.

Dan has 5 of the same type of coin in his hand.

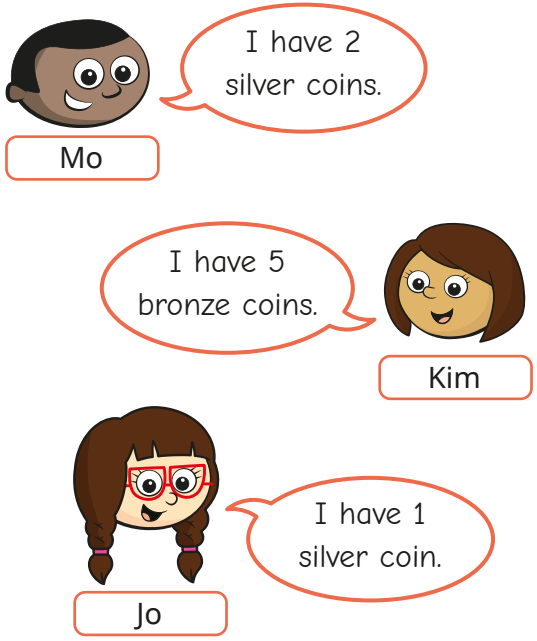


Do you agree with Tiny?

Explain your answer.

No

Mo, Kim and Jo each have some money.



They each have the same amount of money.

Which coins do they each have?

Mo: two 5p coins

Kim: five 2p coins

Jo: one 10p coin

Summer Block 6

Time

Small steps

Step 1	Before and after
Step 2	Days of the week
Step 3	Months of the year
Step 4	Hours, minutes and seconds
Step 5	Tell the time to the hour
Step 6	Tell the time to the half hour

Before and after

Notes and guidance

In this small step, children are introduced to key vocabulary relating to time.

Provide children with opportunities to explore the vocabulary in context, relating to their everyday routines. A visual timetable can support children to keep track of events and support discussions around the order of events.

Children use "before", "after", "first", "next" and "finally" to describe, sort and order events. When talking about the day, they use "morning", "afternoon" and "evening". This can be explored through daily discussion of everyday routines, for example "After story time, we will go home." Story books can be used to support this in a different context and allow children to relate to events that happen within a story.

Things to look out for

- Children may confuse "before" and "after".
- Children may confuse "morning", "afternoon" and "evening".
- Events that may occur in both the morning and afternoon/evening, for example reading a book, could add confusion when ordering events.

Key questions

- What do you do in the morning/afternoon/evening?
- Which activities do you do before/after school?
- Why have you ordered the pictures before/after each other?
- Can you describe what you have done today, using "This morning, I …", "This afternoon, I …", "This evening, I …"?
- What comes after/before _____?

Possible sentence stems

- Before/after I _____, I _____
- First, I …

  Next, I …

  Finally, I …
- This morning, I …

  This afternoon, I …

  This evening, I …

National Curriculum links

- Sequence events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening)

Before and after

Key learning

Provide children with a selection of fruit and wooden skewers and get them to make kebabs. Can they tell their partner how they made their kebab using the terms "first", "next", "then" and "finally"?

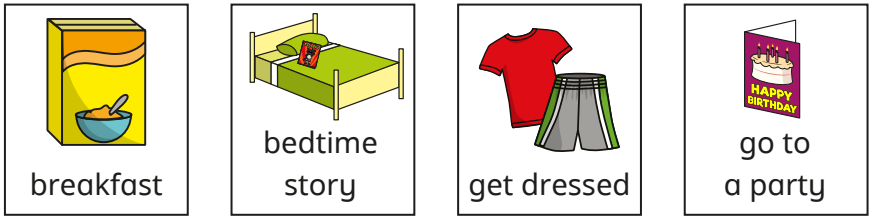
Read *Peace at Last* by Jill Murphy. Ask children to retell the story, recalling the different noises in the correct order and using the terms "before", "after", "first", "then", "next" and "finally".

Encourage children to use the same vocabulary to make up their own stories about the noises they may hear at home.

Ask children to create a story or draw their daily routine using a comic strip.

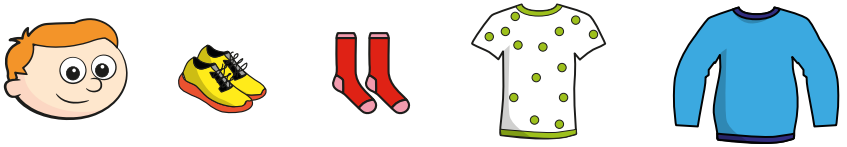
Then ask them to cut up and rearrange their story or daily routine to create a silly story. Get them to tell their story to a partner using "before", "after", "first", "then", "next" and "finally".

- Sort the activities into **before** and **after** school.



  - Think of one more activity for each group.
  - Sort the activities into three groups: "morning", "afternoon" and "evening".

- Describe the order in which Ron should put these clothes on.



Could Ron have put some items on in a different order? Why?

- Complete the sentences.

When I wake up in the morning, the first thing I do is ...

Next, I ...

Before I go to school, I ...

After school, I ...

Before and after

Reasoning and problem solving

Tiny is describing some things that Kim did today.

Tiny is in a muddle!

What is the correct order?

First, Kim got dressed.

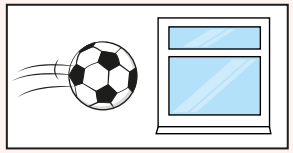
Then, Kim ate lunch.

Finally, Kim went to bed.

Ask children to look at the picture and then draw what may have happened before and after the event.

Encourage children to describe the sequence of events using the words **before** and **after**.

before



after

Discuss possible answers as a class.

Days of the week

Notes and guidance

In this small step, children relate the vocabulary used in the previous step, "before" and "after", to the days of the week.

Children learn the sequence of the days in a week and know that there are 7 days that repeat in a cycle. Rhymes and songs can be a useful aid in remembering the correct order of the days. Children also describe events using the vocabulary "today", "yesterday" and "tomorrow".

Support children's developing understanding of time by regularly referring to a calendar displaying the days of the week. This will help them to relate the reoccurring weekly timetable of events to specific days of the week, for example PE lessons on a Tuesday and a Thursday, and to record and count down to key activities and events.

Things to look out for

- Some children may struggle to remember the correct order for the days of the week, especially those that begin with the same initial sound or letter.
- Children may struggle to name which day was "yesterday", due to the fact that they often learn the days in a specific order going forwards.

Key questions

- What day is it today?
- Which day comes before/after _____?
- What day was it yesterday?
- What day will it be tomorrow?
- If today is _____, what will tomorrow be?
- Which days are at the weekend? How do you know?

Possible sentence stems

- The day after _____ is _____
- The day before _____ is _____
- Today is _____, so tomorrow will be _____
- Today is _____, so yesterday was _____

National Curriculum links

- Sequence events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening)
- Recognise and use language relating to dates, including days of the week, weeks, months and years

Days of the week

Key learning

Sing *The Days of the Week* song. Then discuss the names and the sequence of the days of the week.

Ask what children do on each day. Describe the events of the days they come to school and the days they stay at home.

Ask questions about activities at school, for example "Which days do you do PE?" or "Which day is Forest School?"

Ask children to draw a timetable of the events they complete on each day.

Read and discuss the events in *Jasper's Beanstalk* by Mick Inkpen.

Talk about what Jasper does on each day.

- On which day did Jasper water his bean?
- On which day did he pick up all the slugs?

Provide days of the week cards and pictures of what Jasper does. Order the days of the week and choose pictures to match each day.

Task children to make up their own days of the week short story.

Read *The Princess and the Wizard* by Julia Donaldson.

Place pictures based on events from the story in various places around the room, missing one day out. Ask children to hunt for the pictures and place them in order. Which day is missing?

- Fill in the missing days of the week.

  Complete the sentences.

  - Today is Friday.

    Tomorrow is _____

  - Today is Thursday.

    Yesterday was _____

  - Today is _____

    Tomorrow is Monday.

  - Today is _____

    Yesterday was Monday

Sunday
Tuesday
Wednesday
Saturday

- Which days of the week are at the weekend?

Days of the week

Reasoning and problem solving

Here is Ben's calendar.

Monday	Tuesday	Wednesday	Thursday	Friday
 swimming	 painting	 football	 bike ride	

What did Ben do on Monday?

On which day did Ben play football?

On which day did Ben not do any activities?

What did Ben do the day before he played football?

swimming

Wednesday

Friday

painted

Sort the days of the week into the table.

Wednesday

Tuesday

Monday

Friday

Thursday

Sunday

Saturday

At school	Not at school

In a week, how many more days are you at school than not at school?

At school: Monday, Tuesday, Wednesday, Thursday, Friday

Not at school: Saturday and Sunday

3

Months of the year

Notes and guidance

In this small step, children name and sequence the months within a year.

As with the previous step, they continue to develop their understanding and use of "before" and "after" and apply this to the calendar year. They learn to relate events to months, noting when familiar celebrations, such as birthdays, occur.

A classroom calendar allows children to explore the sequence of the months of the year and to begin to learn the number of days in each month. Familiar rhymes and songs can support children to remember this. Exploring monthly calendars with the days of the week and dates allows children to further develop understanding from the previous step.

Things to look out for

- Children may confuse months that begin with the same initial sound or letter, such as March and May or June and July.
- Children may assume that all months have the same number of days.

Key questions

- How many months are there in a year?
- Which month are we in now?
- What month will come next?
- Which month comes before/after _____?
- Which month is your birthday in?
- Which month do we start school in?
- Which months are the summer holidays in?

Possible sentence stems

- There are _____ months in a year.
- The month before/after _____ is _____
- It is _____ now, so next month will be _____

National Curriculum links

- Recognise and use the language relating to dates, including days of the week, weeks, months and years
- Sequence events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening)

Months of the year

Key learning

Talk to children about the names of the months of the year and the sequence they come in, using songs or rhymes to support learning the names and order.

As a class, count the number of days in two months on a grid-style calendar. Discuss whether they are the same or different.

As a class, chant rhymes about the number of days in each month, for example:

> 30 days has September, April, June and November.
> All the rest have 31, except February alone, which has 28 days clear and 29 in each leap year.

Provide children with a selection of books and images relating to the seasons and talk about the changes that happen over the course of a year.

Which month is before February? Which month comes after March?

Task children in groups to design their own calendar page for different months, including key events in the school year.

Order the months to create a class calendar.

- Complete the sentences.
  - The month after July is _____
  - The month before November is _____
  - The month before _____ is February.

- Here is part of Mo's calendar.

February						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6	7	8	 my birthday 9	10	11

  - What month is shown on the calendar?
  - On what date is Mo's birthday?
  - What day of the week is the 1st of the month?
  - How many days are there in the whole month?

Months of the year

Reasoning and problem solving

Jo is chanting the months of the year.

What mistakes has Jo made?

What is the correct order?

Jo has mixed up May and March, and July and June.

Dan gets a party invitation in April.

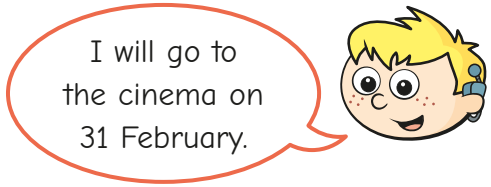
The party is in August.

What months come between April and August?

May, June and July

Max looks at his calendar.

He wants to go to the cinema at the end of the month.



Is this possible?

Compare answers with a partner.

If Max goes to the cinema on the 31st of the month, which month could it be?

No

January, March, May, July, August, October or December

Hours, minutes and seconds

Notes and guidance

In this small step, children develop their understanding of hours, minutes and seconds.

Children learn that seconds are a shorter period of time than minutes and minutes are a shorter period of time than hours. Although they do not need to convert between different units, it is helpful for them to know that an hour is composed of 60 minutes and that a minute is composed of 60 seconds.

Children make decisions about which unit of time would be most appropriate to measure a given activity. They compare time using vocabulary such as "quicker" and "slower". When comparing durations, they need to understand that the smaller number of seconds, minutes or hours is the quicker time. Learning can be supported by practical investigations in which children use suitable equipment to measure the length of the activity, for example a stopwatch or a sand timer.

Things to look out for

- Children may believe that the greater number of seconds, minutes or hours is the quicker time.
- Children may struggle to use and read digital recording equipment.

Key questions

- Which is longer/shorter: one hour, one minute or one second?
- How many minutes are there in an hour?
- How many seconds are there in a minute?
- Would you measure the activity in hours, minutes or seconds?
- How many _____ do you think that you can do in 10/20/30/60 seconds?
- Who was quicker/slower? How do you know?

Possible sentence stems

- A _____ is longer/shorter than a _____
- There are _____ seconds in a _____
- There are _____ minutes in an _____
- I know that _____ is quicker/slower than _____, because ...

National Curriculum links

- Compare, describe and solve practical problems for time
- Measure and begin to record time (hours, minutes, seconds)

Hours, minutes and seconds

Key learning

Read *Just a Second* by Steve Jenkins.

Ask children to think of activities that they might be able to complete in one second. Which activities could take one minute to complete?

Introduce a range of different sand timers as a method of measuring time.

Children can use the timers to measure how many star jumps/hops/skips they can complete in one minute.

Model how to measure and read the time on a stopwatch in hours, minutes and seconds. Take children outside to take part in a race. Record the time it takes to move from the start to the finish line. Compare times using "quicker" and "slower". Ask what a shorter/longer time means.

- Would you measure the activities in seconds, minutes or hours?

brushing teeth	reading a book	saying the alphabet
travelling on a plane	playing outside	sleeping at night

- Write the time shown on each stopwatch.

A

B

C

A _____ seconds

B _____ minutes and _____ seconds

C _____ hours, _____ minutes and _____ seconds

Hours, minutes and seconds

Reasoning and problem solving

Are the units of time sensible for each activity?

length of a football match in seconds 

length of a film in minutes 

length of the school day in hours 

What units of time are more sensible?

No

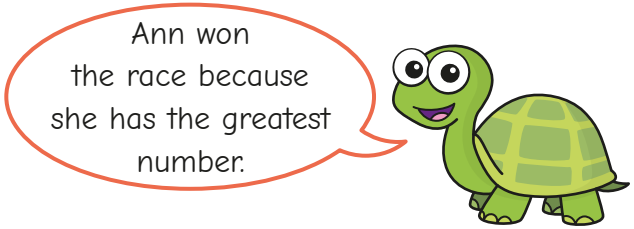
Yes – but could also be measured in hours

Yes

Some children run a race.

Here are their times in seconds.

Tom	Sam	Fay	Ann	Mo
26	17	21	33	22



Do you agree with Tiny?

Explain your answer.

Put the children in the order they finished the race.

No

Sam, Fay, Mo, Tom, Ann

Tell the time to the hour

Notes and guidance

In this small step, children are introduced to telling the time to the hour using an analogue clock. They are formally introduced to the term "o'clock" for the first time, although they may already have encountered this.

Initially, children explore time using a number line and learn that an analogue clock face is a special type of number line. When pointing to numbers, ensure that the hand points exactly to the number and not to the side of it. Explain that when we use the word "hand", we are referring to the arrow/pointer; this is specific to the topic of time.

To begin with, children focus on reading time to the hour using only the hour hand. Once they are confident with this, they learn about the minute hand and that the hour hand is shorter than the minute hand. They recognise that when the minute hand is pointing directly to 12, they need to look at the shorter hand to see which hour it is.

Things to look out for

- Some children may find the language relating to time and the intervals of time confusing.
- Children may confuse the hour hand and the minute hand.

Key questions

- How is a clock similar to/different from a number line?
- Which number is the hour hand pointing to?
- How could you show me _____ o'clock?
- What do you notice about the _____ hand?
- Where will the hour hand be at _____?
- Where will the minute hand be at _____?

Possible sentence stems

- The _____ hand is pointing to _____ and the minute hand is pointing to _____
  The time is _____ o'clock.
- At _____ o'clock, the hour hand will be pointing to _____ and the minute hand will be pointing to _____

National Curriculum links

- Tell the time to the hour and half past the hour and draw the hands on a clockface to show these times

Tell the time to the hour

Key learning

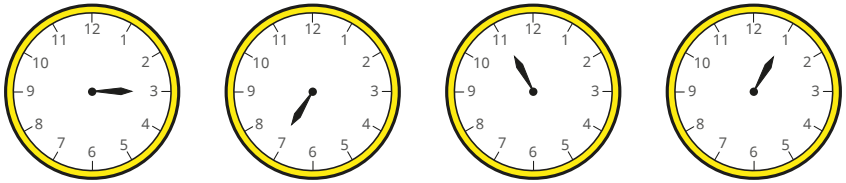
Make a 1–12 number line in the playground using a long rope and digit cards. Children walk along the line, shouting out the time when they reach each number.

Once children are confident with the passage of time, arrange the rope in a circle. Children walk around the line, again telling the time at each point.

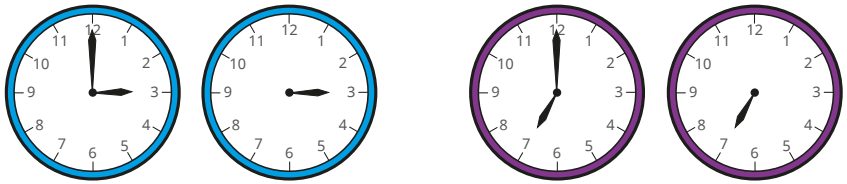
Discuss that in a full day this happens twice, as there are 24 hours in a day.

Children could go through the full day, counting through the hours in the morning and then the hours in the afternoon/evening.

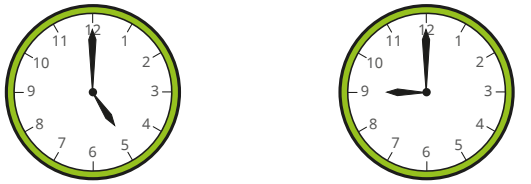
- What hour is the hand pointing to?



- What is the same about the clocks? What is different?

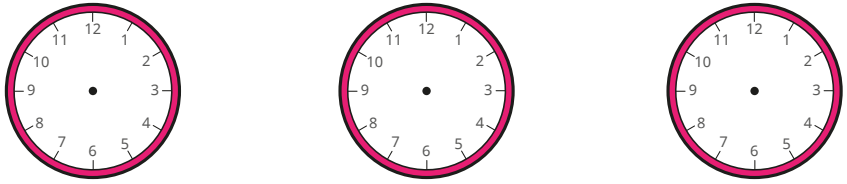


- Match the clocks to the times.



9 o'clock | two o'clock | 5 o'clock

- Draw hands on the clocks to show the times.

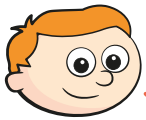


eight o'clock | 1 o'clock | twelve o'clock

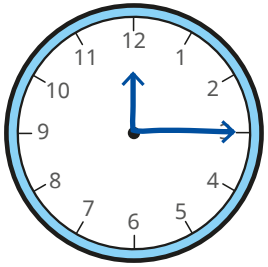
Tell the time to the hour

Reasoning and problem solving

Ron is drawing times on clocks.

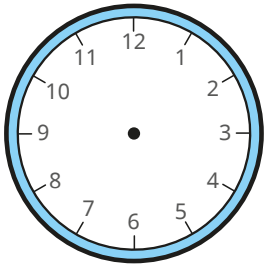


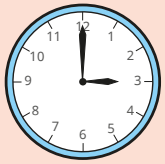
I have drawn 3 o'clock.



What mistake has Ron made?

Draw hands on the clock to show 3 o'clock.

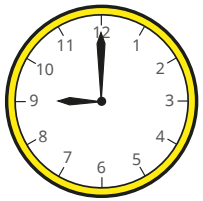




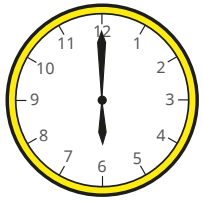
Mo, Kim and Sam all go to bed at different times in the evening.

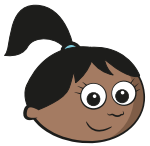
The clocks show each child's bedtime.

Mo

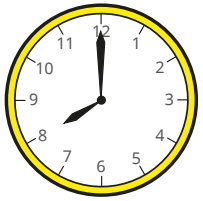


Kim





Sam



Who goes to bed first?

Who goes to bed last?

Kim

Mo

Tell the time to the half hour

Notes and guidance

In this small step, children build on the previous step of telling time to the hour to now tell the time to the half hour.

Initially, they tell the time to the half hour using only the hour hand and notice that the hour hand is halfway between numbers. They learn the term "half past", linking it to their knowledge of fractions.

Once children are confident with this, look at the minute hand. Building on the knowledge that in an hour the minute hand travels all the way around the clock, they see that at half past the minute hand has travelled halfway around the clock from 12 and is now pointing at 6

Things to look out for

- When drawing hands on a clock face to show half past, children may draw the hour hand pointing directly at the hour.
- Children may misread the hour when describing half past, due to the position of the hour hand, for example reading half past 2 as half past 3 because the hour hand is between 2 and 3
- Children may confuse the hour hand and the minute hand.

Key questions

- Which hour has the hand gone past?
- Which two numbers is the hour hand pointing between?
- Where will the hour hand be at half past _____?
- If the minute hand moves from 12 to 12 in a full turn, where will it be pointing after a half turn?
- If the hour hand is pointing between _____ and _____, and the minute hand is pointing to 6, what time is it?
- How would you show half past _____ on a clock face?

Possible sentence stems

- The minute hand is pointing to _____

  The hour hand is pointing between _____ and _____

  The time is half past _____
- The next hour will be _____ o'clock.

National Curriculum links

- Tell the time to the hour and half past the hour and draw the hands on a clockface to show these times

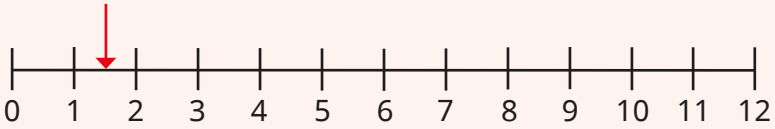
Tell the time to the half hour

Key learning

Show children a 1–12 number line. Make an arrow to represent the "hand".

Place the hand halfway between 1 and 2

Explain that because the hour hand has gone past 1 and is halfway between 1 and 2 o'clock, it is half past 1

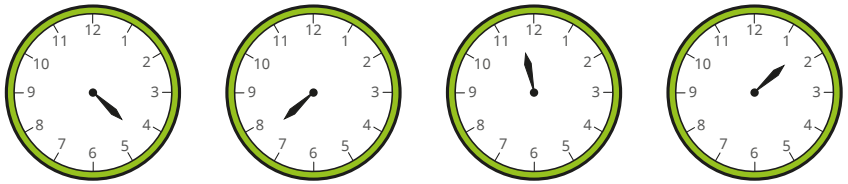


Move the hand along the number line, stopping halfway between numbers and asking children to tell you the time.

Use a clock model to show children the movement of the minute hand during an hour, moving around the circle from 12 until it reaches 12 again – a full turn. Show that during this time the hour hand moves more slowly from one hour to the next.

Ask children where the minute hand will be pointing after half a full turn.

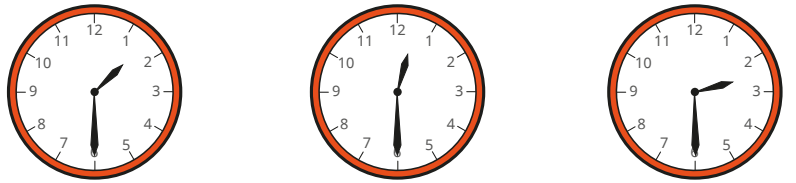
- Complete the sentences for each clock.



The hour hand is pointing halfway between _____ and _____

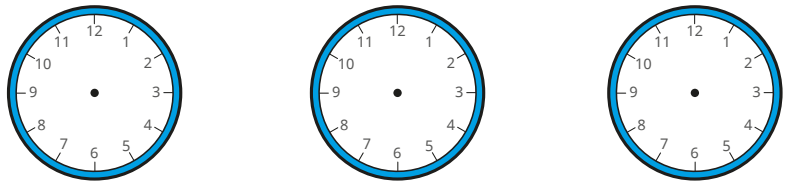
The time is half past _____

- Match the clocks to the times.



half past twelve	half past 2	half past one

- Draw hands on the clocks to show the times.

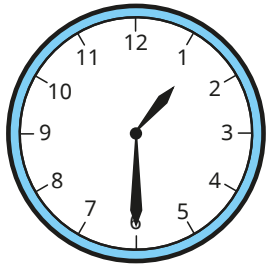


half past 1 | half past four | half past 8

Tell the time to the half hour

Reasoning and problem solving

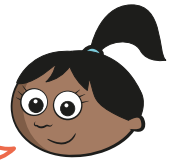
Mo and Sam are telling the time.



The time is 6 past 1

Mo

The time is half to 2



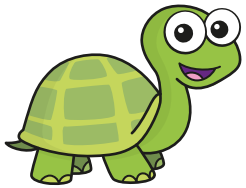
Sam

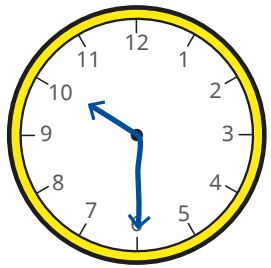
What mistakes have Mo and Sam made?

What time is shown on the clock?

half past 1

Tiny draws hands on the clock to show the time half past 10





What mistake has Tiny made?

Draw hands on the clock to show half past 10