

**Extra challenges:**



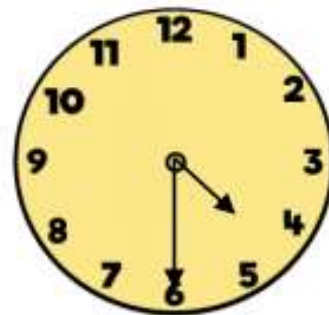
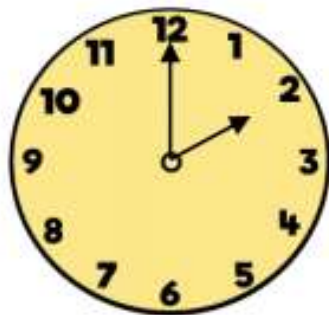
It is quarter to 9 so the minute hand should be on 3 and the hour hand should be nearer 8 than 9.

Do you agree with Sue?  
Explain your answer.



The train to Blackpool leaves at quarter past and quarter to every hour.

Make a list of the times of the trains Oliver can catch if he gets to the train station between 2 o'clock and half past 4



The time is half past a particular hour.  
The time is between 7 o'clock and quarter past 9.



What could the time be?



Quarter past is always later than quarter to.

Do you agree with Teddy?

Explain why.

Sophia starts her Maths questions at 10 past 11



Each question takes her 5 minutes to complete.  
She completes 7 questions.

What time does Sophia finish her Maths questions?  
Explain how you found the answer.



Eva

The day starts at 12 o'clock and ends at 12 o'clock.

Here are Eva's calculations for working out how many hours there are in a day.

12	6	12	6	12
1	7	1	7	
2	8	2	8	
3	9	3	9	
4	10	4	10	
5	11	5	11	

I counted them up, and there are 25 hours in a day.



What mistake has Eva made?

Oh no! The hour hand has fallen off the class clock!



Start



End

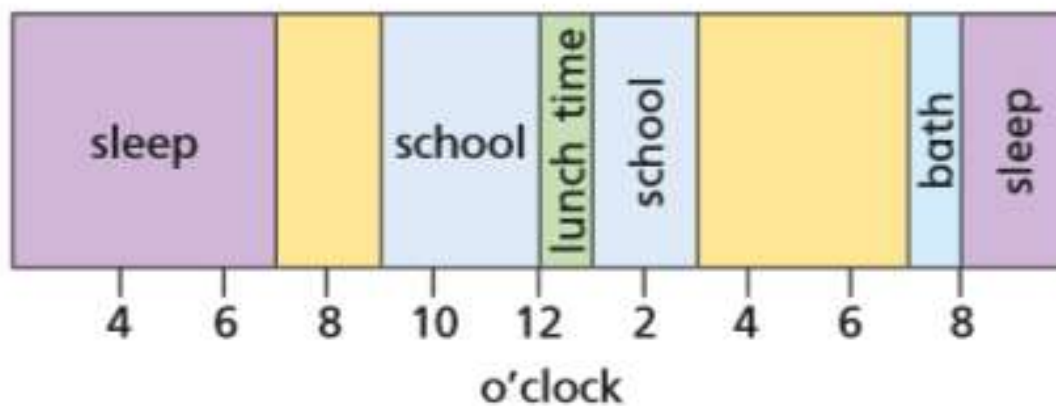
The clock shows the start and end time of a film.

How long do you think the film lasted?

Complete the table. You may use clocks to help you.







Start	End	Duration
Ten past 7		1 hour and 10 minutes
4 o'clock		1 hour and 15 minutes
5 to 9		1 hour and 30 minutes

The bar model shows a section of Dexter's day.



- What time did Dexter go to bed?
- What time did Dexter get up?
- What do you think Dexter did between 7 o'clock and 9 o'clock in the morning?
- What was Dexter doing at 6 o'clock in the morning?
- What could Dexter have been doing at 6 o'clock in the evening?

Complete the table.

60 minutes earlier	Time now	30 minutes later
3 o'clock		half past 4
		
		
		
		
		

The children in Class 2 ran around the edge of the school field.

The table shows their start and finish times.

Name	Start time	Finish time
Tommy	10 past 2	half past 2
Amir	quarter past 2	half past 2
Dora	20 past 2	quarter to 3
Rosie	20 past 2	20 to 3

Use the information in the table to complete the sentences.

- a) \_\_\_\_\_ took the longest time.
- b) \_\_\_\_\_ took the shortest time.
- c) Tommy ran faster than \_\_\_\_\_.
- d)



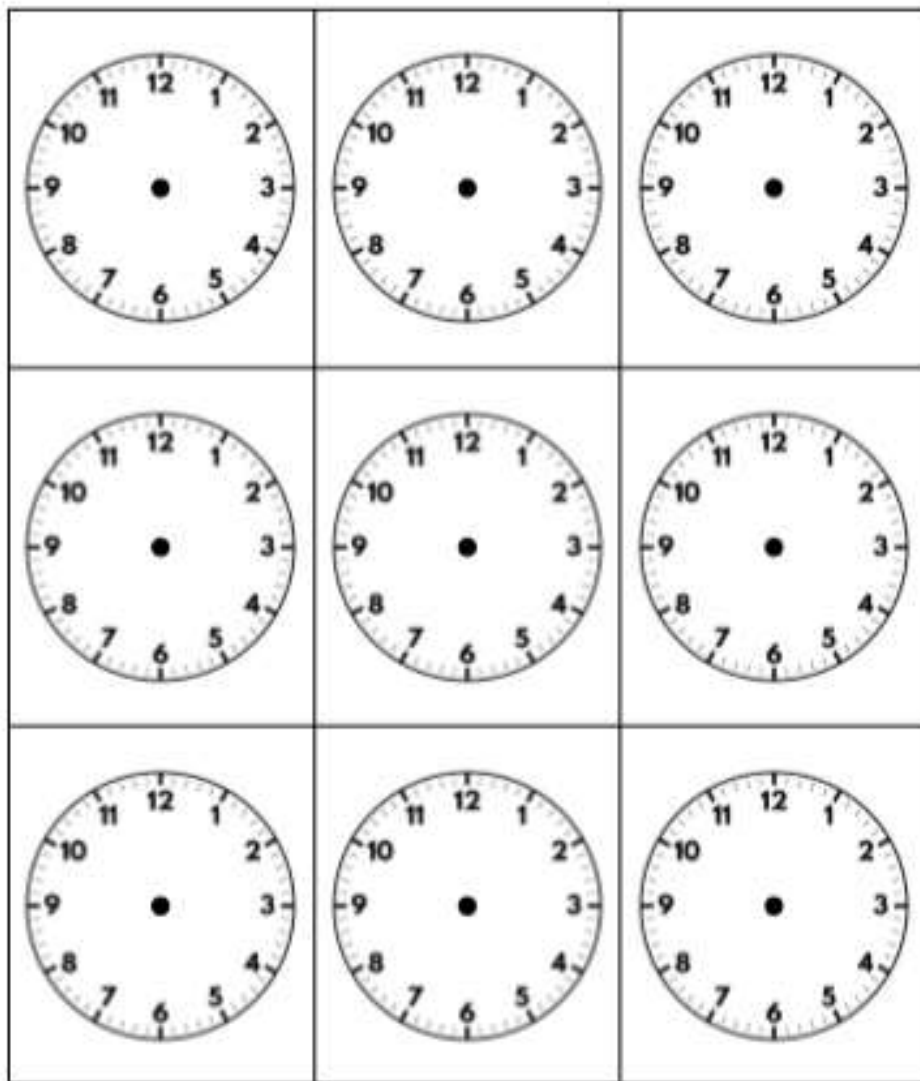
Amir and I  
took the same length  
of time because we  
finished together.

Is Tommy correct?

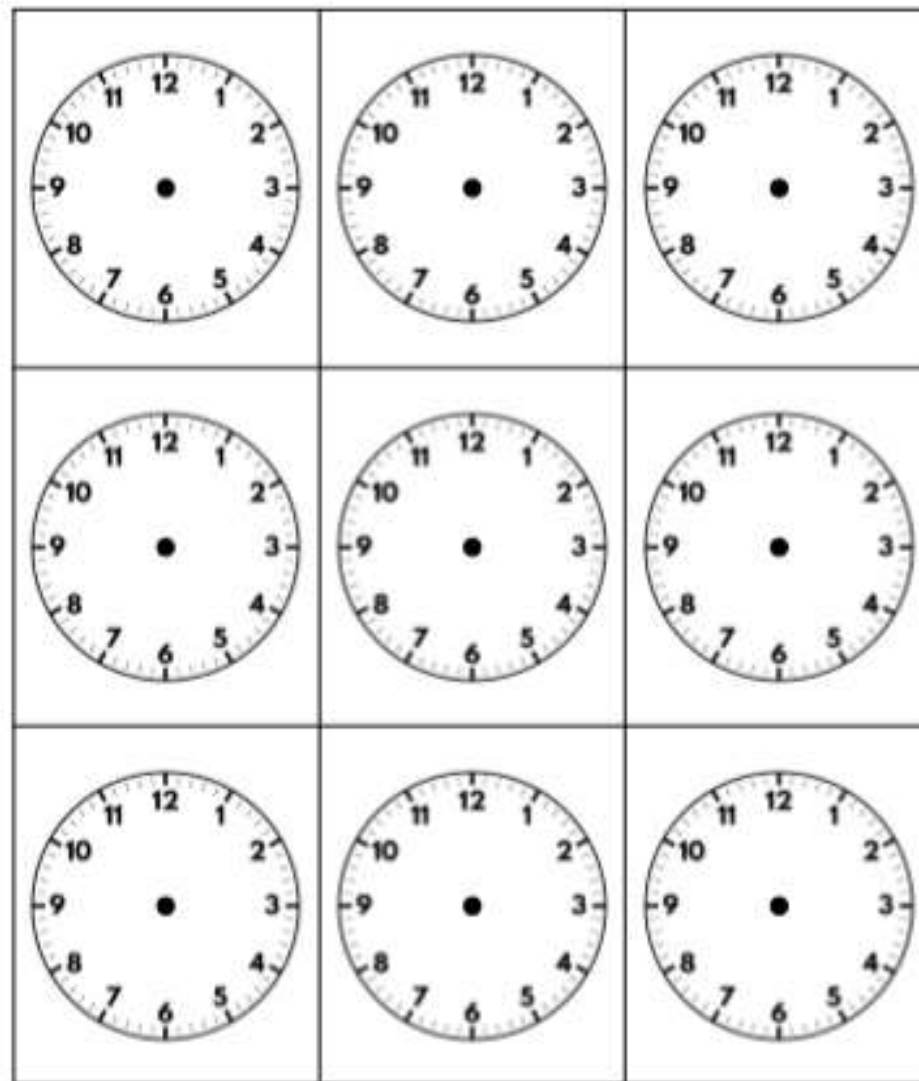
How do you know?

# Time bingo!

Draw times on your clocks (quarter past, quarter to, half past or o'clock).  
When the bingo caller calls a time out, if you have it on your board, cross it off.  
If you cross off all the times on your board shout BINGO! Good luck!



Draw times on your clocks (quarter past, quarter to, half past or o'clock).  
When the bingo caller calls a time out, if you have it on your board, cross it off.  
If you cross off all the times on your board shout BINGO! Good luck!



## Bingo boards

Write times in the boxes (quarter past, quarter to, half past or o'clock).  
When the bingo caller calls a time out, if you have it on your board, cross it off. If you cross off all the times on your board shout BINGO! Good luck!


Write times in the boxes (quarter past, quarter to, half past or o'clock).  
When the bingo caller calls a time out, if you have it on your board, cross it off. If you cross off all the times on your board shout BINGO! Good luck!




## Bingo calling sheet

12 o'clock	1 o'clock	2 o'clock	3 o'clock	4 o'clock	5 o'clock	6 o'clock	7 o'clock	8 o'clock	9 o'clock	10 o'clock	11 o'clock
Quarter past 12	Quarter past 1	Quarter past 2	Quarter past 3	Quarter past 4	Quarter past 5	Quarter past 6	Quarter past 7	Quarter past 8	Quarter past 9	Quarter past 10	Quarter past 11
Half past 12	Half past 1	Half past 2	Half past 3	Half past 4	Half past 5	Half past 6	Half past 7	Half past 8	Half past 9	Half past 10	Half past 11
Quarter to 12	Quarter to 1	Quarter to 2	Quarter to 3	Quarter to 4	Quarter to 5	Quarter to 6	Quarter to 7	Quarter to 8	Quarter to 9	Quarter to 10	Quarter to 11










The following are time lop cards. They need cutting out like this









and they match end to end like dominoes











## Time loop cards

<b>START</b>	<b>FIVE PAST ELEVEN</b>		<b>TWENTY-FIVE PAST THREE</b>
	<b>TEN PAST TWELVE</b>		<b>HALF PAST FOUR</b>
	<b>QUARTER PAST ONE</b>		<b>TWENTY-FIVE TO FIVE</b>
	<b>TWENTY PAST TWO</b>		<b>TWENTY TO SIX</b>









## Time loop cards

	<b>QUARTER TO SEVEN</b>		<b>5 PAST 3</b>
	<b>TEN TO EIGHT</b>		<b>10 PAST 4</b>
	<b>FIVE TO NINE</b>		<b>QUARTER PAST 5</b>
	<b>TEN O'CLOCK</b>		<b>20 PAST 6</b>









## Time loop cards

	<b>25 PAST 7</b>		<b>QUARTER TO 11</b>
	<b>HALF PAST 8</b>		<b>10 TO 12</b>
	<b>25 TO 9</b>		<b>5 TO 1</b>
	<b>20 TO 10</b>		<b>2 O'CLOCK</b>

## Time loop cards









	<b>FIVE PAST NINE</b>		<b>TWENTY-FIVE PAST ONE</b>
	<b>TEN PAST TEN</b>		<b>HALF PAST TWO</b>
	<b>QUARTER PAST ELEVEN</b>		<b>TWENTY-FIVE TO THREE</b>
	<b>TWENTY PAST TWELVE</b>		<b>TWENTY TO FOUR</b>

### Time loop cards


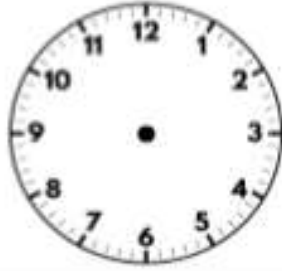



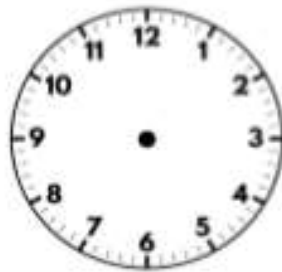
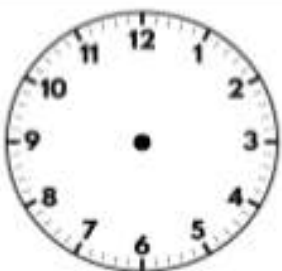

	<b>QUARTER TO FIVE</b>		<b>FIVE PAST SIX</b>
	<b>TEN TO SIX</b>		<b>TEN PAST 7</b>
	<b>FIVE TO SEVEN</b>		<b>QUARTER PAST EIGHT</b>
	<b>EIGHT O'CLOCK</b>		<b>TWENTY PAST 9</b>



## Time loop cards

	<b>TWENTY-FIVE PAST TEN</b>		<b>QUARTER TO TWO</b>
	<b>HALF PAST 11</b>		<b>TEN PAST THREE</b>
	<b>TWENTY-FIVE TO TWELVE</b>		<b>FIVE TO 4</b>
	<b>TWENTY TO 1</b>		<b>FINISH</b>

## Create your own time loop cards

Reso

### Describing movement

Select a card. Describe as many routes as you can find from the start to the end position. What is the shortest route?


### Describing movement

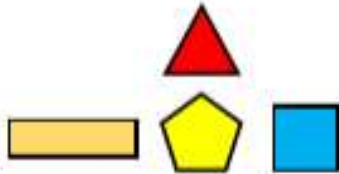
Select a card. Describe as many routes as you can find from the start to the end position. What is the shortest route?


# Describing movement

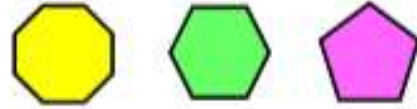


Problem solving and reasoning cards:

Spot and correct the mistakes.



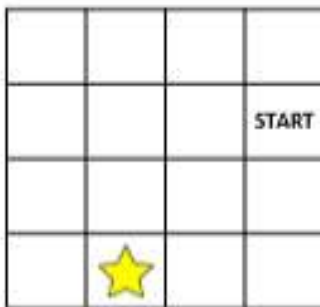
The square is to the right of the pentagon.  
 The triangle is above the pentagon.  
 The pentagon is to the left of the rectangle.  
 The rectangle is to the left of the pentagon.  
 The pentagon is above the triangle.



The pentagon is to the left of the hexagon and the octagon is to the right of the hexagon.

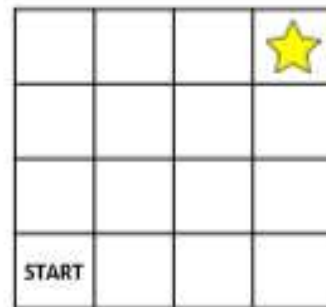
Is Rob correct?  
 Explain how you know.

Write as many different sets of instructions to get from the start point to the star.



How many different ways can you find?  
 What is the shortest route?

Write as many different sets of instructions to get from the start point to the star.



How many different ways can you find?  
 What is the shortest route?



To get to the red bird, the blue bird will move 3 up, 2 right, 1 down and 2 left.

Are the instructions above correct?  
 If not, rewrite the sentences to correct them.

What is the shortest route the blue bird could take to get to the red bird?



Find a route from the sheep to the pig that would take:

- a) the least steps.
- b) 6 steps in total.
- c) 8 steps in total.

# Challenge cards



Problem solving and reasoning cards:

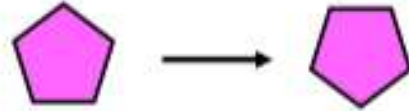
Circle and correct the mistake in the pattern.



The correct shape is:

The next shape in the pattern is:

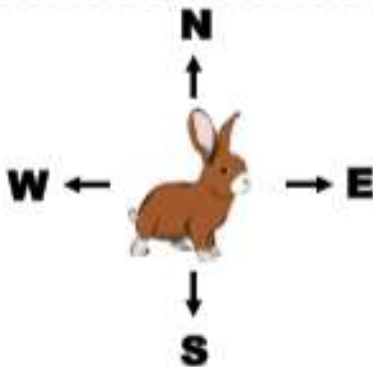
Describe the pattern.



I have rotated the shape three quarter turns clockwise.

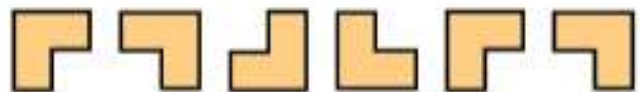
What mistake has Jess made?

What will the shape look like after three quarter turns clockwise?



After 8 half turns clockwise the rabbit will be facing West.

True or false? Explain your answer.



Draw the next 4 shapes in the pattern.



Describe the pattern.



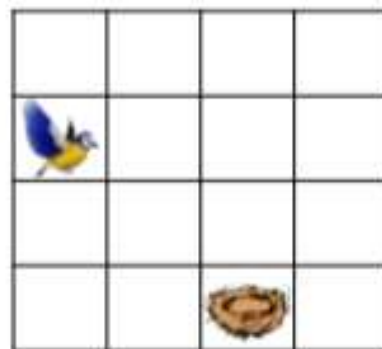
Lock combination:  
50, 75, 50, 25

Start at 0.  
Write the instructions  
to unlock the safe.

The first one has been done for you.

Half turn clockwise...

Find as many different routes as you can from the bird to its nest.



What is the shortest route?

## Teacher notes

### Task 1

Children will select an instruction card and carry out the instructions which uses key terminology: forwards, backwards, turn, left, right. Mastery children may record their results on a 2D grid by marking their starting point and finishing point.

### Task 2

Children will select an instruction card and carry out the instructions which uses key terminology: forwards, backwards, turn, clockwise, anticlockwise. Mastery children may record their results on a 2D grid by drawing their starting point and finishing point using an arrow to show the direction faced.

### Task 3

Children will use the words forwards, backwards, left, right, clockwise, anticlockwise to write a set of instructions for their partner to follow. They will then record their start and end point on a 2D grid. It is important children understand the impact that the starting direction will have on the instructions.

#### DEVELOPING



Children will be given a word bank to help them write instructions. Children may only write up to three instructions in a set.

#### SECURE



Children will be given a word bank to help them write instructions. Children may write up to five instructions in a set.

#### MASTERY



Children will complete instructions without guidance.

For example:

Record:

		X	
	Start		

Instructions:

Move forward 2 spaces.  
 Make a quarter turn clockwise.  
 Move forward 1 space.

## Task 1 (left / right)

Move forwards 3 spaces. Turn right.	Move backwards 2 spaces. Turn left.
Move forwards 2 spaces. Turn left. Move forward 1 space.	Move forwards 2 spaces. Turn right. Move backwards 2 spaces.
Move backwards 2 spaces. Turn right. Move forward 1 space. Turn right.	Move forwards 3 spaces. Turn left. Turn right. Move forward 1 space.
Move forwards 2 spaces. Turn left. Move backwards 3 spaces. Move forwards 2 spaces. Turn right.	Move backwards 3 spaces. Turn right. Move backwards 2 spaces. Turn left Move backwards 2 spaces.
Move backwards 4 spaces. Turn left. Turn left. Move backwards 2 spaces. Turn right. Move forwards 2 spaces.	Move forwards 2 spaces. Turn right. Move backwards 2 spaces. Turn left. Turn right. Move forward 1 space.



### Movement and turns



Record:




Instructions:

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### Terminology word bank

move	steps	forwards	backwards	turn
left	right	clockwise	anticlockwise	

move	steps	forwards	backwards	turn
left	right	clockwise	anticlockwise	

move	steps	forwards	backwards	turn
left	right	clockwise	anticlockwise	

move	steps	forwards	backwards	turn
left	right	clockwise	anticlockwise	

move	steps	forwards	backwards	turn
left	right	clockwise	anticlockwise	

move	steps	forwards	backwards	turn
left	right	clockwise	anticlockwise	