

*Measures:
money and time*

7.2.2.2

LO: To understand months and years.

I know the number of days in each month.

I can use a calendar to help me answer questions.

I understand that some years are leap years and have an extra day.

We are Mathematicians!

We are learning to ...

In year 2 we...

By the end of the year, we will be able to...

In future, this will help with ...

Key vocabulary we will use in this unit...

Partner Talk

- 1) How many days are there in one week?
- 2) How many months are there in one year?
- 3) How many days are there
 - a) in an ordinary year?
 - b) in a leap year?
- 4) What month comes before January?

I can't remember how many days there are in each month.



Don't worry Tiny. I know a rhyme you can use.

30 days has September,
April, June and November,
All the rest have 31
Except February, 28 days here
Or 29 in each leap year.

Month	Number of days
January	
February	
March	
April	
May	
June	
July	
August	
September	
October	
November	
December	

30 days has September,
April, June and November,
All the rest have 31
Except February, 28 days here
Or 29 in each leap year.



We can use the rhyme
to help us complete
the table.



How do we know if
it's a leap year?



Leap years come every
4 years. 2020 was a
leap year

So 2024 must be a
leap year too?





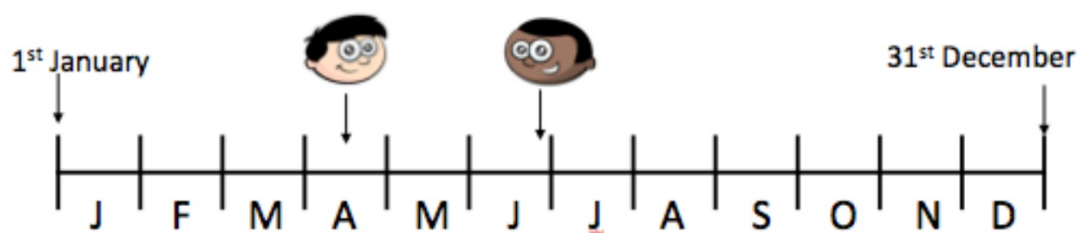
One month is the same as 4 weeks.

Is Ron correct?

February has 28 days.



This number line represents one year.



Dexter and Mo draw arrows to mark their birthdays

Estimate the date of their birthdays.



December starts on a [redacted].

Mon	Tue	Wed	Thu	Fri	Sat	Sun
		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		

So the 30th November must be a [redacted]



There are [redacted] Fridays in December.



But only [redacted] Saturdays.



Christmas day is on a [redacted].

December has [redacted] days! I know that from the rhyme!



1 Use a calendar to help you answer the questions.



a) How many days are in each month in a normal calendar year?

January	<input type="text"/>	May	<input type="text"/>	September	<input type="text"/>
February	<input type="text"/>	June	<input type="text"/>	October	<input type="text"/>
March	<input type="text"/>	July	<input type="text"/>	November	<input type="text"/>
April	<input type="text"/>	August	<input type="text"/>	December	<input type="text"/>

5 The number line represents one year.

a) Complete the boxes with an estimate of the date.
The first one has been done for you.



b) Estimate where these dates belong and label them on the number line.

2 April 20 September 28 February

Write $<$, $>$ or $=$ to complete the statements.

- a) 1 week 8 days e) 12 months 1 year
b) 8 days 2 weeks f) 2 years 22 months
c) 3 weeks 1 month g) 36 months 3 years
d) 5 weeks 1 month

3 Here is a calendar from December 2016

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
			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	

- a) What day of the week was 25 December in 2016?
b) Jack's birthday is on 17 December.
What day of the week was his birthday in 2016?
c) How many days are there between Jack's birthday and Boxing Day?
d) What day of the week was New Year's Day in 2017?

Extension

Huan, Dani and Filip are counting up in different numbers of days.

Huan starts on 1 July and counts in 2s.

Dani starts on 31 May and counts in 5s.


Filip starts on 30 May and counts in 3s.


Who will reach August first?


May							June							July							August		
1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3
8	9	10	11	12	13	14	8	9	10	11	12	13	14	8	9	10	11	12	13	14			
15	16	17	18	19	20	21	15	16	17	18	19	20	21	15	16	17	18	19	20	21			
22	23	24	25	26	27	28	22	23	24	25	26	27	28	22	23	24	25	26	27	28			
29	30	31					29	30						29	30	31							



6 Jack, Eva, Whitney and Ron were all born in the same year.

Jack  My birthday is between Eva's and Ron's.

 I am the oldest.

 I am older than Ron.

Whitney

Eva

Match the birthday to the child.

Jack	Eva	Ron	Whitney
2 November	31 January	15 June	4 May

Time to fill in your target grid...

Year 3 NUMERACY TARGET GRIDS	I can solve missing number problems.	I can solve multiplication and division problems, using scaling.	I can measure the perimeter of simple 2-D shapes	I can solve problems involving fractions	I can identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	I know how many seconds are in a minute, days in each month, year and leap year.	
	I can compare and order numbers up to 1000.	I can estimate the answer to a calculation and use inverse operations to check	I can solve multiplication and division problems.	I can estimate and read time to the nearest minute and compare times using appropriate vocabulary.	I can compare and order fractions, and fractions with the same denominator.		
	I can count from 0 in multiples of 4, 8, 50 and 100.	I can solve addition and subtraction problems.	I can use mental strategies to multiply a 2-digit number by a 1 digit number.	I can tell the time using Roman numerals from I to XII	I can add and subtract fractions with the same denominator within one whole. $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$	I identify whether angles are greater than or less than a right angle.	
	I can identify, represent and estimate numbers in different contexts.	I can subtract numbers up to three digits using an efficient written method.	I can write and calculate statements for X and \div . Using the multiplication tables that I know.	I can tell and write the time from an analogue clock and 12-hour and 24-hour clocks.	I can recognise and show, using diagrams, equivalent fractions.	I can recognise that two right angles make a half-turn. 3 make $\frac{3}{4}$ of a turn and 4 make a complete turn.	I can solve two-step problems using presented data
	I can find 10 or 100 more or less than a given number.	I can add numbers up to three digits using an efficient written method.	I can recall and use multiplication and division facts for the 8 times table.	I can add and subtract amounts of money to give change using £ and p.	I can recognise and use fractions as numbers.	I can identify right angles.	I can solve one-step problems using presented data
	I can recognise the place value of each digit in a three-digit number.	I can add and subtract a 3 digit-number and hundreds mentally.	I can recall and use multiplication and division facts for the 4 times table.	I can measure and compare, add and subtract volume/capacity (l/ml)	I can find and write fractions for a set of objects.	I can recognise angles as a property of shape or a description of a turn.	I can interpret and present data using tables.
	I can solve number problems and practical problems.	I can add and subtract a 3 digit-number and tens mentally.	I can recall and use multiplication and division facts for the 3 times table.	I can measure and compare, add and subtract mass (kg/g)	I recognise that tenths arise from dividing an object into 10 equal parts.	I can recognise 3-D shapes in different orientations.	I can interpret and present data using pictograms.
	I can read and write numbers to 100 in numerals and in words.	I can add and subtract a 3 digit-number and ones mentally.	I can use efficient written methods to multiply a 2 digit and a 1 digit number.	I can measure and compare, add and subtract lengths (m/cm/mm)	I can count up and down in tenths.	I can make 3-D shape using modelling materials.	I can interpret and present data using bar charts.
						I can draw 2-D shapes.	
	Number and Place Value	Addition and Subtraction	Multiplication and Division	Measurements	Fractions	Geometry	Statistics

8.2.2.2

LO: To understand hours are in a day.

I know how many hours are in a day.

I know the difference between a school week and a calendar week

I can use and understand words such as midday, midnight and noon.

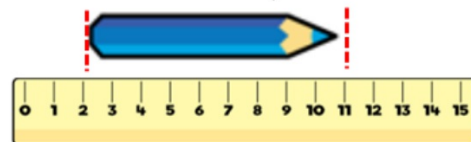
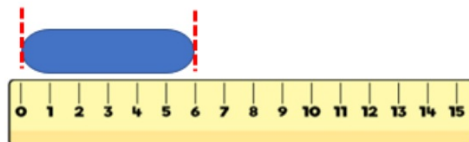
I understand the difference between a day and daytime.

Flashback 4

Year 3 | Week 4 | Day 4

5 x 6

- 1) How many days are in 1 year?
- 2) What day is 5 days after Saturday?
- 3) Which month is closest to December, May or September?
- 4) How much shorter is the rubber than the pencil?



Here are some of the numbers we use to measure time.

12

7

365

24

366

60

Can you explain what each number represents?

It's nine o'clock.

Who is correct?



Have a think



It's time for school



It's time for bed

Open Tuesday's PPT...

1 Write the times of day in order of when they happen.

afternoon morning midnight midday evening

2 Match the description to the correct number.

months in a year

5

days in a week

168

hours in a day

31

days in a non-leap year

7

hours in a week

24

days in a school week

365

maximum number of days in a month

12

3 Fill in the missing numbers.

a) 1 day = 24 hours

days = 48 hours

4 days = hours

days = 960 hours

41 days = hours

b) 1 week = 7 days

2 weeks = days

weeks = 21 days

60 weeks = days

63 weeks = days

4 Aisha arrives home at 11 o'clock.



It must be nearly lunchtime.

Dora



It must be dark outside.

Amir

Who do you agree with?

Explain your answer.



Mo

I get up at 7 o'clock in the morning and go to bed at 7 o'clock at night. This means I have been awake for a full day.

Do you agree with Mo?

Explain your answer.

Su	Mo	Tu	We	Th	Fr	Sa
	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			

In this month, there are no school holidays.

In this month we have to come to school for 31 days.



Teddy

Do you agree with Teddy?
Explain your thinking.

5 There are 5 days in a school week.

- a) What is the difference in the number of days in 4 school weeks compared to 4 whole weeks?
- b) There are 7 hours in a school day.
How many more hours are there in 5 full days than 5 school days?

Extension

- 8 There are more days in October than September.
Therefore, there are more school days in October than September.
Is this always, sometimes or never true?
How do you know?

- 9 Esther goes to school for 5 hours each day.
There are no school holidays in the month of March.
How many hours could Esther spend at school in March?

True or False ?

Hours in a day

If it is noon on Tuesday, in 24 hours it will be midnight on Wednesday.

Time to fill in your target grid...

Year 3 NUMERACY TARGET GRIDS									
I can compare and order numbers up to 1000.	I can solve missing number problems.	I can solve multiplication and division problems, using scaling.	I can solve multiplication and division problems.	I can measure the perimeter of simple 2-D shapes	I can solve problems involving fractions	I can identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	I know how many seconds are in a minute, days in each month, year and leap year.		
I can count from 0 in multiples of 4, 8, 50 and 100.	I can estimate the answer to a calculation and use inverse operations to check	I can solve multiplication and division problems.	I can use mental strategies to multiply a 2-digit number by a 1 digit number.	I can estimate and read time to the nearest minute and compare times using appropriate vocabulary.	I can compare and order fractions, and fractions with the same denominator.	I identify whether angles are greater than or less than a right angle.			
I can identify, represent and estimate numbers in different contexts.	I can solve addition and subtraction problems.	I can write and calculate statements for X and \div . Using the multiplication tables that I know.	I can recall and use multiplication and division facts for the 8 times table.	I can tell the time using Roman numerals from I to XII	I can add and subtract fractions with the same denominator within one whole. $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$	I can recognise that two right angles make a half-turn. 3 make $\frac{3}{4}$ of a turn and 4 make a complete turn.	I can solve two-step problems using presented data		
I can find 10 or 100 more or less than a given number.	I can subtract numbers up to three digits using an efficient written method.	I can recall and use multiplication and division facts for the 4 times table.	I can add and subtract amounts of money to give change using \pounds and p.	I can tell and write the time from an analogue clock and 12-hour and 24-hour clocks.	I can recognise and show, using diagrams, equivalent fractions.	I can identify right angles.	I can solve one-step problems using presented data		
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Number and Place Value	Addition and Subtraction	Multiplication and Division	Measurements	Fractions	Geometry	Statistics			

9.2.2.2

LO: To know quarter to and quarter past on an analogue clock.

I know the difference between the minute hand and the hour hand.

I can use the language of 'past' and 'to' accurately.

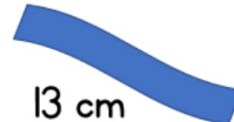
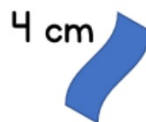
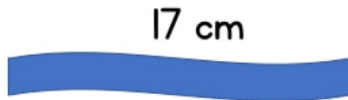
I understand that an hour is 60 minutes and can be split into quarters.

Flashback 4

Year 3 | Week 4 | Day 4

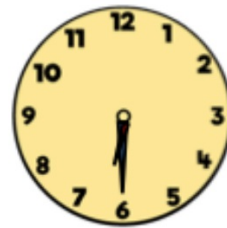


- 1) How many hours in 3 days?
- 2) Which is longer 2 days, 50 hours or 100 minutes?
- 3) What time is it when the minutes hand and hours hand are both at 12?
- 4) Here are three ribbons, what is the total length of the ribbons?



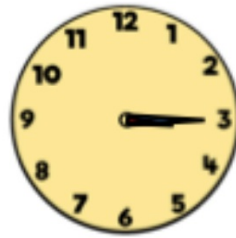
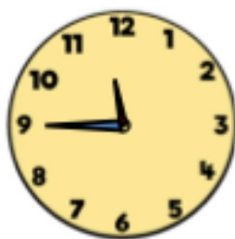
Partner talk

1) What time is shown on each clock below?



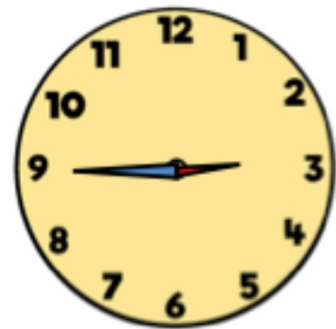
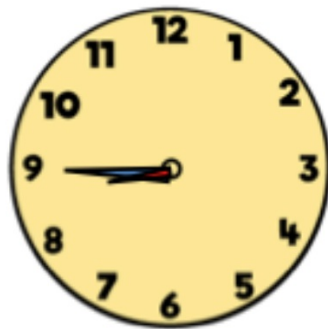
2) What fraction of the shapes below is shaded?







Which clock shows quarter to 3?



Match the times to the correct clocks.



quarter to 6

quarter past 6

half past 6

1 Match the clocks to the times.



quarter
past 1



quarter
past 12



quarter
past 9



quarter
past 5

2 Match the clocks to the times.



quarter to 10



quarter to 1



quarter to 7



quarter to 3

Complete the sentence.

At quarter past, the minute hand points to

Complete the sentence.

At quarter to, the minute hand points to

3 Write the time shown on each clock.

Use the word bank to help you.

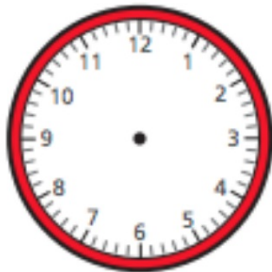
quarter to

quarter past

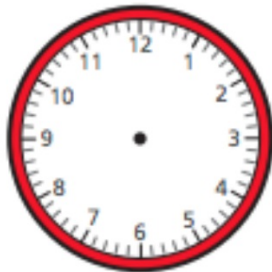




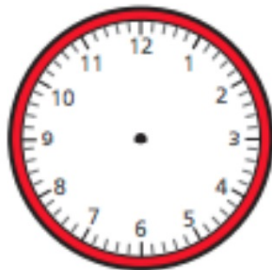
4 Draw hands to show the time on each clock.



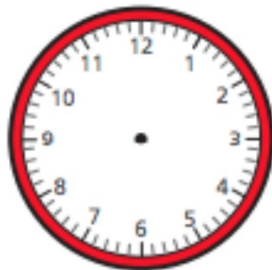
quarter past 11



quarter past 3



quarter to 4



quarter to 1

5 The clocks have no numerals.



a)



You can still
work out what time
they show.

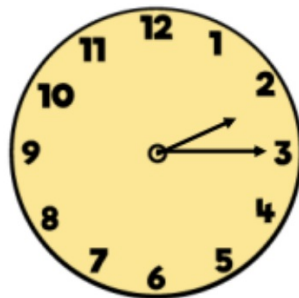
Why does Dora think this?

b) Write what time each clock shows.

True or False ?

Quarter past and quarter to

There are 30 minutes between quarter past 2 and quarter to 3



Time to fill in your target grid...

Year 3 NUMERACY TARGET GRIDS	I can solve missing number problems.	I can solve multiplication and division problems, using scaling.	I can measure the perimeter of simple 2-D shapes	I can solve problems involving fractions	I can identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	I know how many seconds are in a minute, days in each month, year and leap year.	
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						I can draw 2-D shapes.	
	Number and Place Value	Addition and Subtraction	Multiplication and Division	Measurements	Fractions	Geometry	Statistics

1.0.2.2.2

LO: To tell the time to 5-minute intervals on an analogue clock.

I know the difference between the minute hand and the hour hand.

I can use the language of 'past' and 'to' accurately.

I understand that minutes are counted in groups of 5.

Hickory, Dickory, Clock



Level One

o'clock, quarter past, quarter to, half past



Level Two

tell the time to five minutes, including Level One



Level Three

tell any time

Read the time written in black and white.

Click / press on the clock face with the matching time.

Children in Year 3 (7-8yrs) can also play using Roman Numerals.



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Play level one

Partner Talk

1) How many minutes are there in 1 hour?

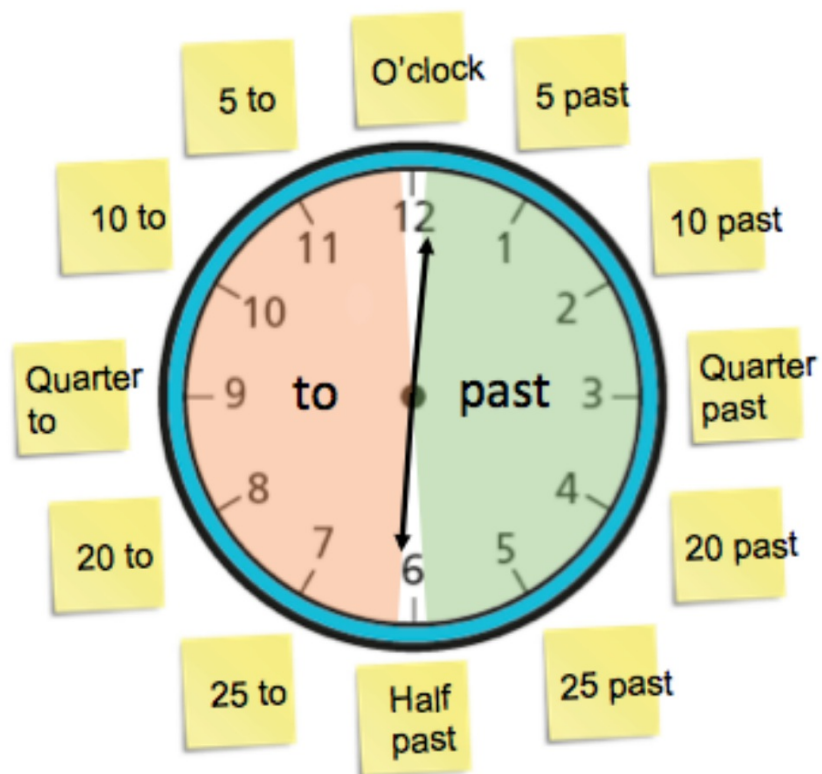
2) What time is shown on the clocks?



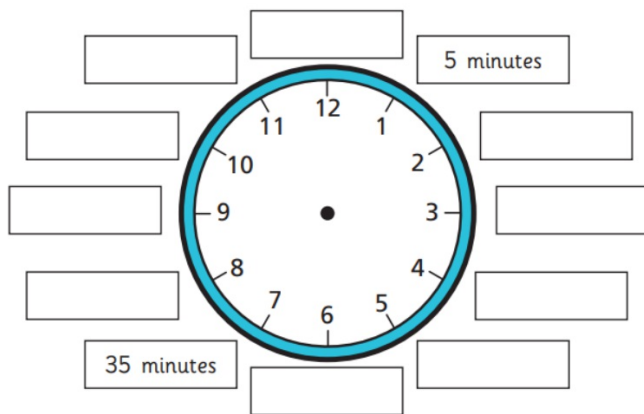
3) How many minutes in half an hour?

4) How many minutes in a quarter of an hour?

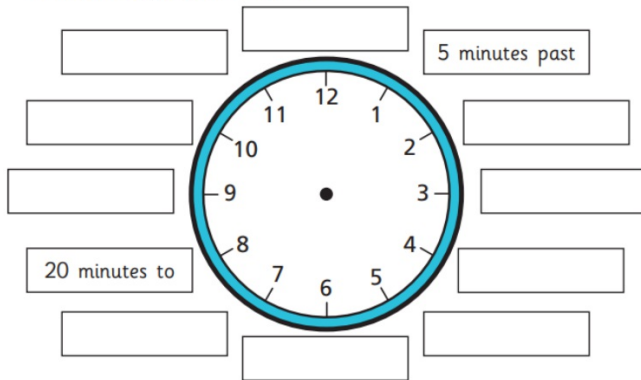
Now use Thursday's PPT...



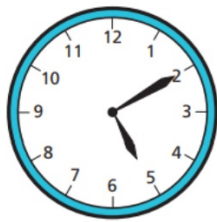
1 Label the clock to show the number of minutes past the hour.



2 Label the clock to show what time would be shown if the minute hand was pointing to each interval.



3



The hour hand is pointing just after 5 and the minute hand is pointing to 2, so the time is 2 minutes past 5



What mistake has Ron made?
What time is it?

4 What time is shown on each clock?

a)



c)



b)



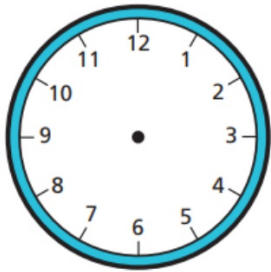
d)



5

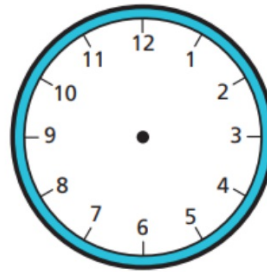
Draw the hands on the clocks to show the correct times.

a)



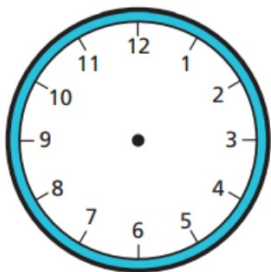
15 minutes past 6

c)



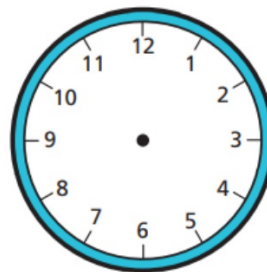
25 minutes to 9

b)



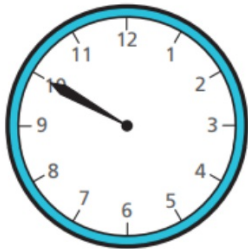
15 minutes to 9

d)



5 minutes to 12

- 6 Jack wants to tell the time, but the hour hand has fallen off the clock.



There are 12
different possible times
it could be during
a full day.



Do you agree with Jack?

- 7 The minute hand and the hour hand of a clock are both pointing to an even number.

It is before midday. What times could it be?

Give three possible answers.

Extension



Dora

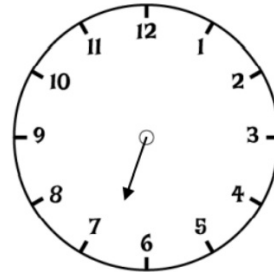
The clock shows ten minutes to 3

The hour hand is not quite pointing to the 3, so it must be ten to 2



Amir

Who do you agree with?
Explain your thinking.



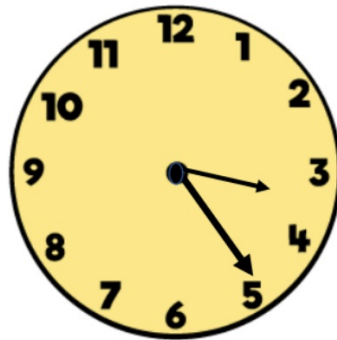
This clock has lost its minute hand.

What time could it be?
Justify your answer.

True or False ?

Telling the time to 5 minutes

The time is 25 minutes to 3



Time to fill in your target grid...

Year 3 NUMERACY TARGET GRIDS	I can solve missing number problems.	I can solve multiplication and division problems, using scaling.	I can measure the perimeter of simple 2-D shapes	I can solve problems involving fractions	I can identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	I know how many seconds are in a minute, days in each month, year and leap year.	
	I can compare and order numbers up to 1000.	I can estimate the answer to a calculation and use inverse operations to check	I can solve multiplication and division problems.	I can estimate and read time to the nearest minute and compare times using appropriate vocabulary.	I can compare and order fractions, and fractions with the same denominator.		
	I can count from 0 in multiples of 4, 8, 50 and 100.	I can solve addition and subtraction problems.	I can use mental strategies to multiply a 2-digit number by a 1 digit number.	I can tell the time using Roman numerals from I to XII	I can add and subtract fractions with the same denominator within one whole. $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$	I identify whether angles are greater than or less than a right angle.	
	I can identify, represent and estimate numbers in different contexts.	I can subtract numbers up to three digits using an efficient written method.	I can write and calculate statements for X and \div . Using the multiplication tables that I know.	I can tell and write the time from an analogue clock and 12-hour and 24-hour clocks.	I can recognise and show, using diagrams, equivalent fractions.	I can recognise that two right angles make a half-turn. 3 make $\frac{3}{4}$ of a turn and 4 make a complete turn.	I can solve two-step problems using presented data
	I can find 10 or 100 more or less than a given number.	I can add numbers up to three digits using an efficient written method.	I can recall and use multiplication and division facts for the 8 times table.	I can add and subtract amounts of money to give change using £ and p.	I can recognise and use fractions as numbers.	I can identify right angles.	I can solve one-step problems using presented data
	I can recognise the place value of each digit in a three-digit number.	I can add and subtract a 3 digit-number and hundreds mentally.	I can recall and use multiplication and division facts for the 4 times table.	I can measure and compare, add and subtract volume/capacity (l/ml)	I can find and write fractions for a set of objects.	I can recognise angles as a property of shape or a description of a turn.	I can interpret and present data using tables.
	I can solve number problems and practical problems.	I can add and subtract a 3 digit-number and tens mentally.	I can recall and use multiplication and division facts for the 3 times table.	I can measure and compare, add and subtract mass (kg/g)	I recognise that tenths arise from dividing an object into 10 equal parts.	I can recognise 3-D shapes in different orientations.	I can interpret and present data using pictograms.
	I can read and write numbers to 100 in numerals and in words.	I can add and subtract a 3 digit-number and ones mentally.	I can use efficient written methods to multiply a 2 digit and a 1 digit number.	I can measure and compare, add and subtract lengths (m/cm/mm)	I can count up and down in tenths.	I can make 3-D shape using modelling materials.	I can interpret and present data using bar charts.
						I can draw 2-D shapes.	
	Number and Place Value	Addition and Subtraction	Multiplication and Division	Measurements	Fractions	Geometry	Statistics