

## Time Maths, week commencing 8<sup>th</sup> July 2020.

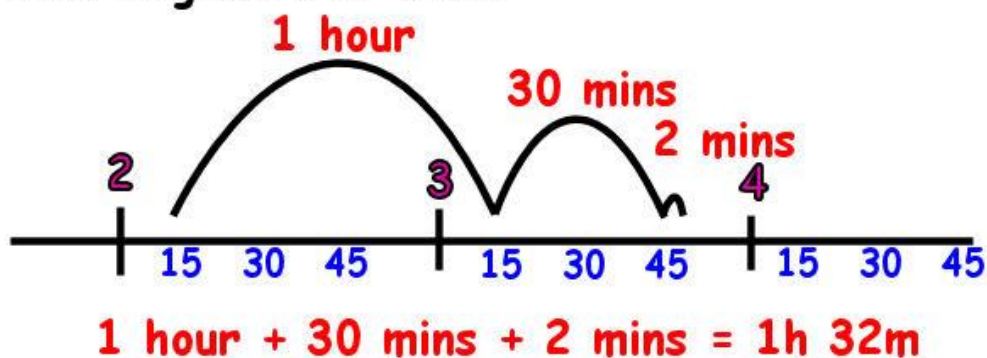
This week, we are going back to using our time skills and calculating periods of time, as well as looking at and understanding timetables. Can you have a go at the activities below? By the end of this week, you will be a terrific time teller!

Monday- L.O- I can calculate how much time has passed.

Today we are going to be looking at time intervals and how we can calculate how much time has passed within a time period! Today we are going to be looking at some television guides! These show us times in the 24 hour clock, allowing us to see the tv schedule from the morning until the evening. Some of the questions will ask to work out how long a television programme is or which programme has been on for the shortest or longest amount of time. Sometimes, this can be hard to calculate mentally, A great strategy for calculating time which has passed is to use a number line.

**A train leaves at 2:15 and arrives at 3:47.**

**How long does it take?**



By using a number line, you can break down the time that has passed into chunks which are easier to add on. As you can see from the number line above, to get from 2.15 to 3.47, they have added on an hour first to get to 3.15 and then 30 minutes to get to 3.45 and then 2 minutes to get to 3.47. To work out how much time has passed in total, you just need to add up the jumps on your number line. So, in this case 1 hour + 30 minutes + 2 minutes = 1 hour and 32 minutes.

On the class webpage, I have attached a bronze, silver and gold activity based on finding out how much time has passed between different tv programmes on a tv guide. Can you have a go at using the number line method?

Tuesday- L.O- I can convert between units of time.

Can you remember the basic conversions of time?

Here are some you may need to use today:


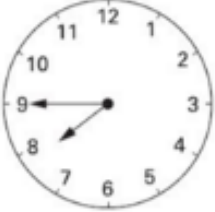
# Converting Units of Time

60 seconds = 1 minute      24 hours = 1 day  
60 minutes = 1 hour      7 days = 1 week

12 months = 1 year  
52 weeks = 1 year  
365 days = 1 year

10 years = 1 decade  
100 years = 1 century  
1000 years = 1 millennium

Can you have a go at the activities below using your skills of converting between units of time?

<p>1) Convert the following</p> <p>a) 8 days = _____ minutes</p> <p>b) 3 weeks = _____ hours</p> <p>c) Half an hour = _____ seconds</p>
<p>2) Write these times in order, starting with the shortest.</p> <p><b>24 days, 600 seconds, 48 hours, 1 month, 7 minutes, 660 minutes</b></p>
<p>3) What is 444 minutes in hours and minutes?</p>
<p>4) There are 12 weeks until Danny's birthday.</p> <p>a) How many hours until his birthday?</p> <p>b) How many minutes is that?</p>
<p>5) Beth is on holiday at Abersoch. High tide this morning is 7.35 a.m.. The next high tide is in 12 hours 23 minutes time.</p> <p>a) What is the time of the next high tide?</p> <p>b) What is 12 hours 23 minutes, in <b>minutes</b>?</p>
<p>6) These clocks show the start and finish times of a TV programme.</p> <div style="display: flex; justify-content: space-around; align-items: center;"><div style="text-align: center;"><p>start</p></div><div style="text-align: center;"><p>finish</p></div></div> <p>a) For how many minutes does the programme last?</p> <p>b) How many seconds is that</p>
<p>7) An aeroplane takes off on Tuesday at 22:47 It lands on Wednesday at 07:05</p> <p>How long in hours and minutes is the flight?</p>

Wednesday- L.O- I can read and interpret data from a timetable.

You may often come across a timetable and so it is a great skill to be able to read a timetable effectively and interpret the data. You will often see a timetable used for buses or trains- helping you to see when the bus or train will arrive at your stop and when it will arrive at the destination you need to get to.

Stratford Bus Station	07.10	07.30	08.10	08.30
Stratford High Street	07.35	07.55	08.35	08.55
Pudding Mill Lane	07.55	-	08.55	-
Old Ford	08.04	08.24	09.04	09.24
Hackney Wick	08.22	-	09.22	-
Olympic Stadium	08.39	08.59	09.39	09.59
Olympic Aquatic Centre	09.00	09.20	10.00	10.20

This is a timetable for buses stopping at the Olympic park in London, can you use the table to answer these questions?

- How long does it take the 07.30 from Stratford Bus Station to travel to
    - Stratford High Street
    - Old Ford
    - Olympic Stadium
  - At how many bus stops does the 08.35 from Stratford High Street stop before it reaches Hackney Wick?
  - At what time does the 09.24 from Old Ford reach the Olympic Aquatic Centre?
  - If you had to be at the Olympic Stadium by 09.30, which bus would you catch from Stratford High Street?
  - You arrive at Stratford Bus Station at 07.25, how long do you have to wait for the next bus to Hackney Wick?
  - The 08.35 bus from Stratford High Street is running 19 minutes late. At what time will it reach the Olympic Stadium?
- Challenge:

Derby Bus Station	-	-	-	6.00	-	6.20	-	6.40	-
Chaddesden Lane End	-	-	-	6.08	-	6.28	-	6.48	-
Spondon Lodge Lane	-	-	-	6.13	-	6.33	-	6.53	-
Arnhem Terrace	-	-	-	6.15	-	6.35	-	6.55	-
Borrowash	-	-	-	6.20	-	6.40	-	7.00	-
Risley The Risley Park	-	-	-	6.25	-	6.45	-	7.05	-
Sandiacre Town Street	5.19	5.39	5.59		6.24		6.44		-
Sandiacre Stanton Road	5.21	5.41	6.01		6.26		6.46		-
Sandiacre Coronation Avenue					6.27		6.47		-
Sandiacre Travers Road					6.30		6.50		-
Sandiacre Derby Rd/Bostocks La									7.13
Sandiacre White Lion	5.30	5.50	6.10	6.30	6.40	6.50	7.00	7.10	7.15
Stapleford Chequers	5.36	5.56	6.16	6.36	6.46	6.56	7.06	7.16	7.21
Bramcote Sherwin Arms	5.41	6.01	6.21	6.41	6.51	7.01	7.11	7.21	7.26
The Nurseryman	5.44	6.04	6.24	6.44	6.54	7.04	7.14	7.24	7.29
QMC Front	5.47	6.07	6.27	6.49	6.59	7.09	7.19	7.29	7.34
Nottingham Broadmarsh Bus Stn	5.59	6.19	6.41	7.04	7.14	7.24	7.34	7.44	7.49

Can you answer these reasoning questions on the timetable above?

- 1) What time does the bus from Sandiacre Town Street first begin in the morning?
- 2) What time does the first bus leave Derby Bus Station at?
- 3) If I catch the bus from Borrowash at 6.20, what time can I expect to be in Nottingham for?
- 4) If I catch the bus from the Sherwin Arms at 7.11, what time will I get to QMC for?
- 5) If I want to catch the bus from Bostocks Lane what time will I be able to get the bus?

Thursday - L.O- I can answer time based word problems.

Today, I have uploaded silver and gold word problems, using all of the skills we have looked at this week, including converting between units of time, using the 24 hour clocks, calculating time intervals and interpreting data from time tables. Can you have a go at one of the set of word problems? You don't need to print these, you can just download them to view on a screen.

Friday- L.O - I can work systematically to find solutions to a time based investigation.

Today I would like you to have a go at these time investigations? Can you put the skills you have used this week on time into practice? Can you work systematically and break the investigation down into stages?

## Wonky Watches

Age 7 to 11 ★★

Mandeep's watch loses two minutes every hour.

Adam's watch gains one minute every hour.

They both set their watches from the radio at 6:00 a.m. then start their journeys to the airport. When they arrive (at the same time) their watches are 10 minutes apart.



At what time (the real time) did they arrive at the airport?

## How Many Times?

Age 7 to 11 ★

On a digital 24 hour clock, at certain times, all the digits are consecutive (in counting order). You can count forwards or backwards.

For example, 1:23 or 5:43.

How many times like this are there between midnight and 7:00?

How many are there between 7:00 and midday?

How many are there between midday and midnight?