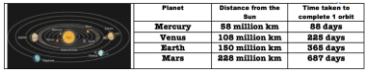
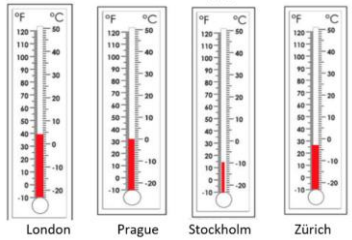
Year 5 maths – Summer 1 Week beginning: 18.5.20

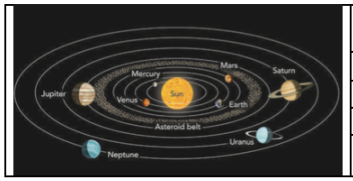
Theme	Measurements Converting Units of Time	Measurements Converting Units of Time	Measurements Converting Units of Time	Measurements Converting Units of Time	Measurements Telling The Temperature
Factual fluency (to aid fluency)	**Practise converting units of time here**	**Practise writing out your 60 times table**	**Practise adding time here**	**Practise counting on in 24s**	**Starting on zero count back in 1s, then try it again starting on 5 and then start on -20 and count on in 2s.**
Problem/ activity of the day **Remember, just like in class, you can still show the depth of your knowledge**	**(Lesson 1 resources below)** **MAKING LINKS:** Last week we converted between units for measuring mass. **THINK: (support below)** Can you help me with this problem?  **How many weeks does each planet take to complete 1 orbit of the sun?** **SEE: (model below)** We can solve this problem by dividing the number of days by 7 because there are 7 days in a week. **DO:** Use what you have learnt today to solve the other problems below.	**(Lesson 2 resources below)** **MAKING LINKS:** Yesterday we converted between weeks and days. **THINK: (support below)** Can you help me with this problem?  **Julie and Harry want to watch two Star Wars films; The Force Awakens and The Last Jedi. The Last Jedi is 50 mins shorter that The Force Awakens. Together, both films run for 3h 50 mins. How long is each film?** **SEE: (model below)** We can solve this problem using a bar model. Watch the video here. **DO:** Use what you have learnt today to solve the other problems below.	**(Lesson 3 resources below)** **MAKING LINKS:** Yesterday we converted between hours and minutes. **THINK: (support below)** Can you help me with this problem? **Joe, Tom and Darren rana racer together. Darren won the race.**  **Darren took 95 secs. Is it possible to find out how long Joe and Tom took?** **SEE: (model below)** We can solve this problem using a bar model. Watch the lesson video here. **DO:** Use what you have learnt today to solve the other problems below.	**(Lesson 4 resources below)** **MAKING LINKS:** Yesterday we converted between minutes and seconds. **THINK: (support below)** Can you help me with this problem? **A train journey from Beijing to Moscow takes 2h and 20mins.**  **The train leaves Moscow on the 11th and 25th of each month. Find the arrival date.** **SEE: (model below)** We can solve this problem by working out the number of whole days in 210 hours and 20 minutes. A calendar will also be useful today. Watch the lesson video here. **DO:** Use what you have learnt today to solve the other problems below.	**(Lesson 5 resources below)** **MAKING LINKS:** Yesterday we converted between hours and days. **THINK: (support below)** Can you help me with this problem?  **How cold are the four cities in Celsius -** ℃ **SEE: (model below)** To solve these problems, you need to know that each small interval is worth 1˚c. Watch the lesson video here. **DO:** Use what you have learnt today to solve the other problems below.
Methods, tips, clues & checks	**Day 1 resources and answers (below)**	**Day 2 resources and answers (below)**	**Day 3 resources and answers (below)**	**Day 4 resources and answers (below)**	**Day 5 resources and answers (below)**

See below for resources to support you to THINK-SEE-DO

DAY 1 RESOURCES:

THINK:

The time taken to complete 1 orbit is how long a planet takes to travel once around the sun.



Planet	Distance from the Sun	Time taken to complete 1 orbit
Mercury	58 million km	88 days
Venus	108 million km	225 days
Earth	150 million km	365 days
Mars	228 million km	687 days

How many weeks does each planet take to complete 1 orbit of the Sun?

SEE:

Don't be tricked - the middle column isn't needed here. Just use the numbers in the final column. To solve each problem, you divide the number of days by 7 because there are 7 days in a week. You can write down the multiples of 7 to help you.

Mercury 1 week = 7 days

weeks

7 | 88 = 12 r 4 days

12 weeks and 4 days

7, 14, 21, 28, 35, 42, 49, 56, 63, 70, 77, 84

Venus 1 week = 7 days

weeks

7 | 225 = 32 r 1 days

32 weeks and 1 day

7, 14, 21, 28, 35, 42, 49, 56, 63, 70, 77, 84

Earth 1 week = 7 days

weeks

7 | 365 = 52 r 1 days

52 weeks and 1 day

7, 14, 21, 28, 35, 42, 49, 56, 63, 70, 77, 84

Mars 1 week = 7 days

weeks

7 | 687 = 98 r 1 days

98 weeks and 1 day

7, 14, 21, 28, 35, 42, 49, 56, 63, 70, 77, 84

DO:

1. Give your answer in weeks and days:

a. 16 days =
b. 31 days =
c. 158 days =
d. 500 days =

2. Give your answer in days:

a. 4 weeks and 1 day =
b. 10 weeks and 5 days =
c. 23 weeks and 6 days =
d. 123 weeks and 4 days =

3. Complete the table:

days	In weeks and days	Rounded to the nearest week
52 days		
	9 weeks 5 days	
100 days		
76 days		
	13 weeks 4 days	

Top tips:

Turn weeks into days by **multiplying by 7**. Eg. 3 weeks = 3x7 = 21 days

When rounding to the nearest week, if you have 1,2 or 3 days, round down. If you have 4, 5 or 6 days, then round up. Eg **4 weeks 3 days** would round down to **4 weeks** but **4 weeks 4 days** would round up to **5 weeks**.

Deepening:

Sarah planted some seeds. The seeds took 12 days to germinate. After another 53 days, Stephanie harvested her first crop. To the nearest week, how long after planting the seeds were the plants ready to harvest?

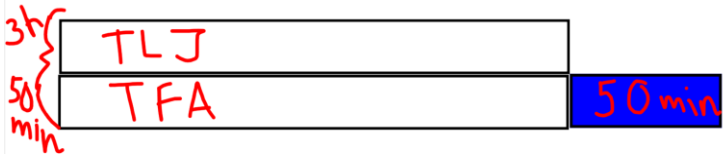
DAY 2 RESOURCES:

THINK:

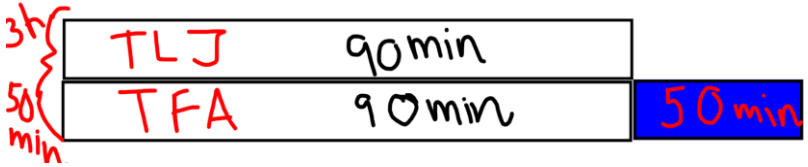
Julie and Harry want to watch two Star Wars movies; The Force Awakens and The Last Jedi. The Last Jedi is 50 min shorter than The Force Awakens. Together, both movies run for 3h 50 mins. How long is each film?

SEE:

Watch the lesson video here. First, I set up the bar model like this:



Now I work out the values of the blank bars.
3h 50 min – 50 min = 3 hours
1 hour = 60 minutes so 3 hours = 3 x 60 minutes = 180 minutes
180 ÷2 = 90 minutes so each blank box is worth 90 minutes.



Now I can work out the length of each film.
The Last Jedi is **90 min** long or I can split 90 into **60min + 30 min** making **1hour and 30 minutes**.
The Force Awakes is 90 + 50 = **140 minutes** which I can split into **120min + 20min** which is the same as **2 hours and 20 minutes.**

DO:

1. Give your answer in hours and minutes:
a. 67 minutes =
b. 90 minutes =
c. 183 minutes =
d. 345 minutes =

2. Give your answer in minutes:
a. 1 hour 59 minutes =
b. 6 hours 4 minutes =
c. 11 hours 47 minutes =
d. 24 hours =

3. Ben watched a TV show that last for 56 minutes and a film that lasted for 99 minutes. How long did Ben watch TV for? Give your answer in hours and minutes.

4. Nada took 48 minutes to finish her home learning. She took three times as long to finish her piano practice. In hours and minutes, how long did Nada take to finish both her home learning and piano practice?

Top tips

1 hour = 60 minutes
2 hours = 120 minutes
3 hours = 180 minutes
4 hours = 240 minutes
5 hours = 300 minutes

Can you work out more?

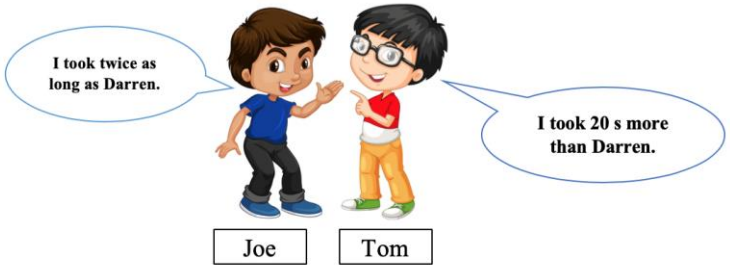
Deepening:

It takes 2 hours and 16 minutes to travel from City A to City Band then to City C. The journey from City A to City B take 46 minutes more than the journey from City B to City C. How long does it take to travel from City A to City B?

DAY 3 RESOURCES:

THINK:

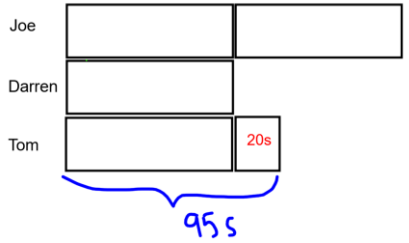
Joe, Tom and Darren ran a race together. Darren won the race.



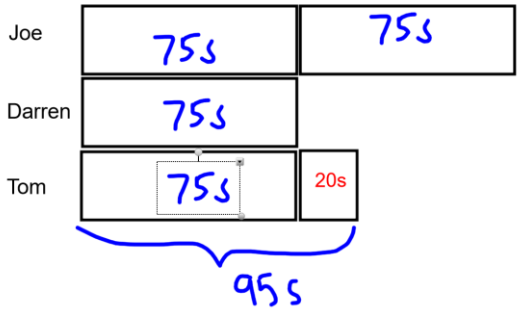
Tom took 95 s. Darren Is it possible to find out how long Joe and Darren took?

SEE:

Watch the lesson video here. First, I set up the bar model like this:



I can work out the blank bit of Tom's bar 95-20 = 75s. So now I can label all the other boxes. Now my bar model looks like this one below.



Now I will work out the time for each child.

Joe 75 +75 = **150s**
I can also split this into **120s+30s** which is **2 minutes 30 seconds**.

Darren = **75 s** I can also split this into **60s + 15s** which is **1 minute 15 seconds.**

Tom = **95s** which I can split into **60s + 35s** which is **1 minute and 35**

DO:

1. Answer in minutes and seconds:
a. 70 seconds
b. 111 seconds
c. 567 seconds

2. Answer in seconds:
a. 4 minutes and 22 seconds
b. 60 minutes and 45 seconds
c. 100 minutes and 59 seconds

Top tips

1 minute = 60 seconds
2 minutes = 120 seconds
3 minutes = 180 seconds
4 minutes = 240 seconds
5 minutes = 300 seconds

Can you work out more?

3. Complete the table:

seconds	In minutes and seconds
127	
	1 minute 55 seconds
159	

5. William takes 5 minutes 57 seconds to run round the park 3 times. For each lap he does he takes 24 seconds longer than the previous lap. How long does it take him to complete the last lap?

6. Rose takes 49 seconds to fold a paper bird. She takes twice as long to fold a paper basket. How long does she take to fold 50 baskets (assuming it takes the same amount of time to fold each one)? Give your answer in minutes and seconds.

Deepening:
Eve completed 3 levels of a game in 2 minutes and 23 seconds. It took her 3 times as long to complete level 2 as level 1. It took her half as long to complete level 3 as it did to complete level 2. How much time did Eve take for each level?

DAY 4 RESOURCES:

THINK:

A train journey from Beijing to Moscow takes 210 h and 20 m.

The train leaves Moscow on the 11th and 25th of each month. Find the arrival date.

SEE:

Watch the video here. First of all, I will work out some facts to help me.

1 day = 24 hours

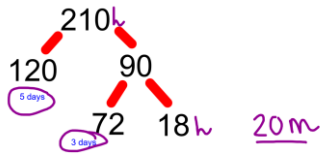
10 days = 240 hours

5 days = 120 hours

1 day = 24 hours

2 days = 48 hours

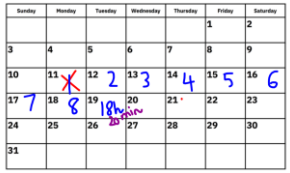
3 days = 72 hours



I will split the 210 hours into 8 days and 18 hours like this. I must also remember about the 20 minutes too.

Now I will use a calendar to count on 8 whole days plus the extra 18 hours and 20 minutes.

May 2020

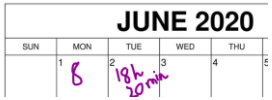


Using this method, this train would arrive on the **19th May**. As an extra challenge, can you think of another way to solve in where the train would actually arrive on the 20th May?

Now I will do the same for the next date.

May 2020

JUNE 2020



The train would arrive on **2nd June**. Again, as an additional challenge can you think of a way in which it could actually arrive on the 3rd June?

DO:

1. Answer in days and hours:

a. 50 hours

b. 123 hours

c. 400 hours

2.Answer in hours:

a. 1 day 23 hours

b. 7 days 17 hours

c. 31 days 13 hours

Top tips

1 day = 24 hours

2 days = 48 hours

3 days = 72 hours

4 days = 96 hours

5 days = 120 hours

6 days = 144 hours.

To turn days into hours I multiply by 24.

3. Luca took 35 hours to plan and design a dolls house, 123 hours to construct and 4 hours to paint it. How long did it take Luca to build the doll's house? Give your answer in days and hours.

4. A ship sailed across the Atlantic Ocean in 180 hours. If the ship set off on 30th March, on which date did it complete its journey?

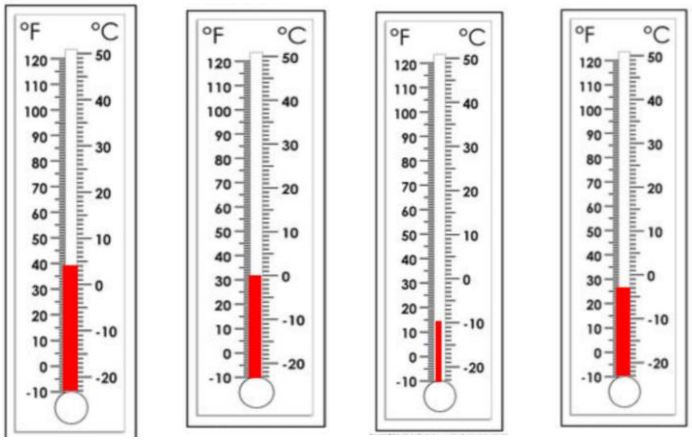
5. The journey from Country A to Country B takes 2 days and 8 hours. The time taken for the journey from County B to County C by train is 12 hours less than the time taken to travel from County A to Country B. What is the total time it takes to travel from Country A to Country B and then to Country C. Give your answer in days and hours.

Deepening:

It takes 200 hours to walk to Liverpool. If I walked for 24 hours a day non-stop, when would I arrive if I left on Tuesday?

THINK:

How cold are the four cities in Celsius (˚C)?



SEE: Watch the video.

Ignore the ˚F numbers on the left. You are just reading the ˚C. Each small interval represents one degree.

The longer unmarked line is the mid point between 0 and 10 so represents a jump of 5 ˚C. For instance the longer unmarked line half way

between 10 ˚C and 20 ˚C represents 15 ˚C.

When you work down from 0, the readings become minus readings, -1 ˚C, -2 ˚C, -3 ˚C etc.

The readings are as follows:

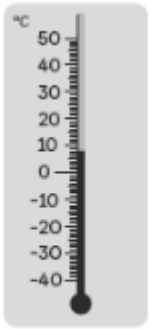
London 4 ˚C
Prague 0˚C
Stockholm -10 ˚C
Zürich -3˚C

DO:

1. Complete the number sequence:

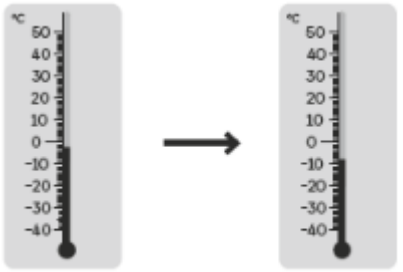
a. -5, ____, -3, -2, -1, 0, 1, 2, 3, 4, ___, 6

b. ___, -9, -8, -7, ___, -5, -4, ___, -2, ___, 0,



2. Write the number:
a. 4 less than 0
b. 13 less than 0
c. 20 less than 0
d. 9 less than 0

3. What is the difference in temperature?



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Deepening:

The temperature at 6 a.m. was recorded each day for one week.

Day	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
Temp (°C)	1	–1	0	3	2	–2	–3

What is the difference in temperature between the coldest day and the warmest day?

At what time of year do you think these temperatures were recorded?

Do you think it might have snowed during the week?

Explain your reasoning.

ANSWERS:

Day 1

Question 1
a. 2 weeks 2 days
b. 4 weeks 3 days
c. 22 weeks 4 days
d. 71 weeks 3 days

Question 2
a. 29 days
b. 75 days
c. 167 days
d. 865 days

Question 3

days	In weeks and days	Rounded to the nearest week
52 days	7 weeks 3 days	7 weeks
68 days	9 weeks 5 days	10 weeks
100 days	14 weeks 2 days	14 weeks
76 days	10 weeks 6 days	11 weeks
95	13 weeks 4 days	13 weeks

Deepening:
To the nearest week = 9 weeks.

Day 2

Question 1
a. 1 hour 7 mins
b. 1 hour 30 mins
c. 3 hours 3 mins
d. 5 hours 45 mins

Question 2
a. 119 mins
b. 364 mins
c. 707 mins
d. 1440 mins

Question 3
2 hours 35 mins

Question 4
3 hours 12 mins

Deepening:
91 minutes

Day 3

Question 1
a. 1 minute 10 seconds
b. 1 minute 51 seconds
c. 9 minutes 27 seconds

Question 2
a. 262 seconds
b. 3645 seconds
c. 6059 seconds

Question 3

seconds	In minutes and seconds
127	2 minutes 7 seconds
115	1 minute 55 seconds
159	2 minutes 39 seconds

Question 4
2 mins 23 seconds for his last lap

Question 5
81 mins 40 secs

Deepening:
Level 1= 26 seconds
Level 2=78 seconds
Level 3= 39 seconds

Day 4

Question 1
a. 2 days 2 hours
b. 5 days 3 hours
c. 16 days 16 hours

Question 2
a. 47 hours
b. 185 hours
c. 757 hours

Question 3
6 days and 18 hours

Question 4
6th or 7th April

Question 5
4 days and 4 hours.

Deepening:
The following Wednesday

Day 5

Question 1
a. -4 and 5
b. -10, -6, -3 and -1

Question 2
a. -4
b. -13
c. -20
d. -9

Deepening:
the difference is 6 degrees. These temperatures were likely to recorded in Winter (possibly November, December or January)
It could have snowed during the week because for it to snow the temperature would go below freezing.