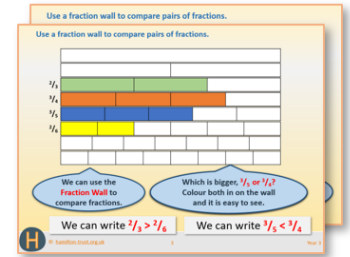


Week 7, Day 1

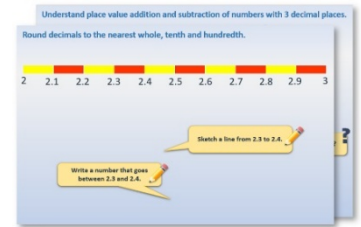
Calculate time intervals

Each day covers one maths topic. It should take you about 1 hour or just a little more.

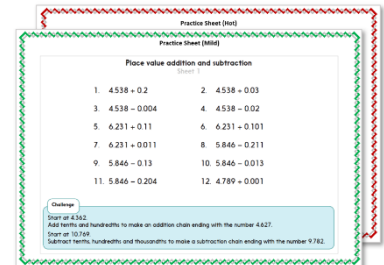
1. If possible, watch the **PowerPoint presentation** with a teacher or another grown-up.



OR start by carefully reading through the **Learning Reminders**.



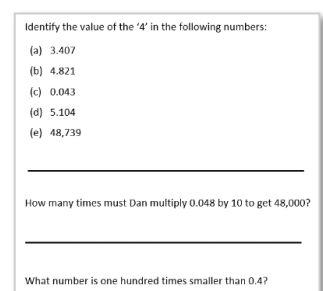
2. Tackle the questions on the **Practice Sheet**.
There might be a choice of either **Mild** (easier) or **Hot** (harder)!
Check the answers.



3. Finding it tricky? That's OK... have a go with a grown-up at [A Bit Stuck?](#)



4. Have I mastered the topic? A few questions to **Check your understanding**.
Fold the page to hide the answers!



Learning Reminders

Calculate time intervals using the 24-hour clock and add lengths of time.



Write down four events and their times using 12-hour format: one in the morning, one in the afternoon, one in the evening and one at night. Then convert each time to 24-hour format, e.g. teatime is quarter past 4pm so it is 16:15.

Here's an example.

10:30am 10:30
4:15pm 16:15
8:35pm 20:35
02:45am 02:45

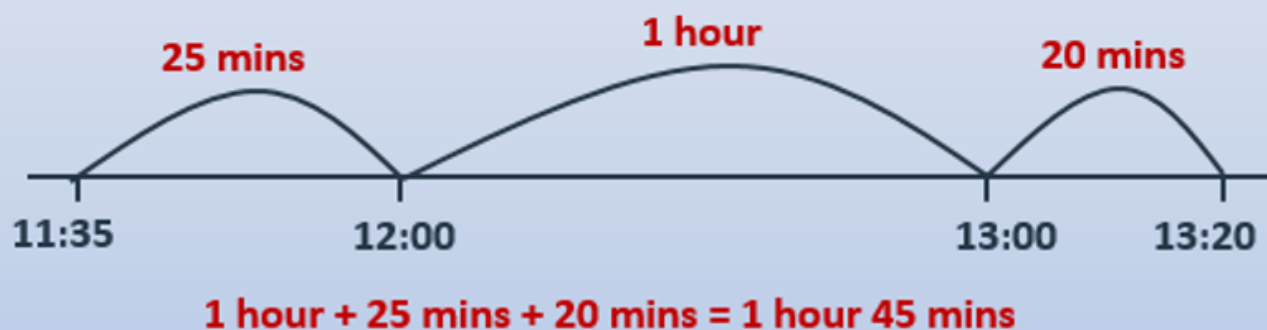
Now write two times with a difference of 1 hour 45 minutes.



Now think of another pair of times with a 1 hour 45 minute difference, the first between 11am and midday, and the second between midday and 1pm. Write them using the 24-hour clock.



Here's an example.



Learning Reminders

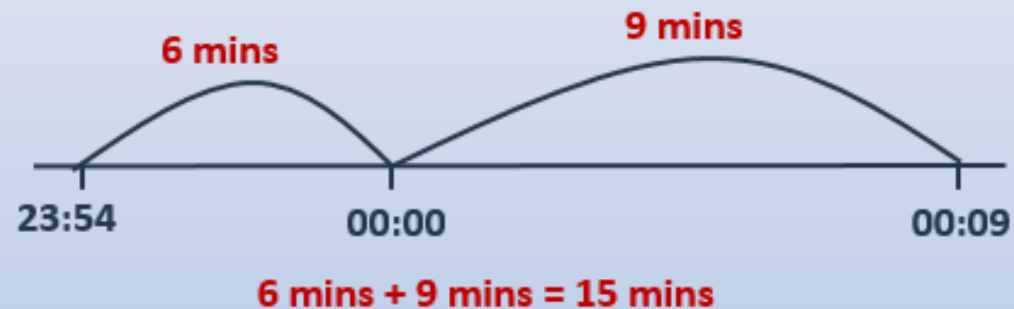
Calculate time intervals using the 24-hour clock and add lengths of time.

Think of a pair of times where:
- one time is on one day and the second time is on the next day;
- the difference between them is only 15 minutes.
Write them using the 24-hour clock.



23:54 and 00:09

Here's an example.



Practice Sheet Mild

Cinema listings

Fill in the missing information.

Film	Start time	Length of film	Finish time
Screen 1: Tom Ted's Holiday	14:20	75 minutes	
Screen 2: Molly the Mischievous Meerkat	14:35		15:55
Screen 1: Superheroes Reunite	15:50	100 minutes	
Screen 2: Voyage to Venus	16:10		17:50
Screen 1: The Legend of Zanuk	19:15	125 minutes	
Screen 2: Journeys of Magical Mystery	19:30		21:45

Challenge

1. Work out how long each screen is empty between the first and second film.
2. Work out the total film time for each screen. Write each answer in hours and minutes.
3. Is there time to show 'Battlecats' before 'The Legend of Zanuk'? Battlecats has a running time of 1 hour 50 minutes.

Practice Sheet Hot

Cinema listings

Fill in the start times.

Film	Start time	Length of film	Finish time
Screen 1: Andy the aardvark's adventures		80 minutes	15:35
Screen 2: Tina the trainee superhero		75 minutes	15:40
Screen 1: Return of the dinosaurs		90 minutes	17:20
Screen 2: Planet rescue		95 minutes	17:30
Screen 1: Journey to Jupiter		130 minutes	21:20
Screen 2: The last sunrise		115 minutes	21:25

Practice Sheets Answers

Cinema listings (mild)

Film	Start time	Length of film	Finish time
Screen 1: Tom Ted's Holiday	14:20	75 minutes	15:35
Screen 2: Molly the Mischievous Meerkat	14:35	80 minutes	15:55
Screen 1: Superheroes Reunite	15:50	100 minutes	17:30
Screen 2: Voyage to Venus	16:10	100 minutes	17:50
Screen 1: The Legend of Zanuk	19:15	125 minutes	21:20
Screen 2: Journeys of Magical Mystery	19:30	135 minutes	21:45

Challenge

- Between the first and second film Screen 1 is empty for 15 minutes and Screen 2 is also empty for 15 minutes.
- The total film time on each screen is:
Screen 1: 300 minutes / 5 hours
Screen 2: 315 minutes / 5 hours 15 minutes.
- There isn't enough time to show Battlecats as there is only 1 hour 45 minutes between Superheroes Reunite and The Legend of Zanuk, Battlecats is 1 hour 50 minutes long.

Cinema listings (hot)

Film	Start time	Length of film	Finish time
Screen 1: Andy the aardvark's adventures	14:15	80 minutes	15:35
Screen 2: Tina the trainee superhero	14:25	75 minutes	15:40
Screen 1: Return of the dinosaurs	15:50	90 minutes	17:20
Screen 2: Planet rescue	15:55	95 minutes	17:30
Screen 1: Journey to Jupiter	19:10	130 minutes	21:20
Screen 2: The last sunrise	19:30	115 minutes	21:25

A Bit Stuck? Time to time

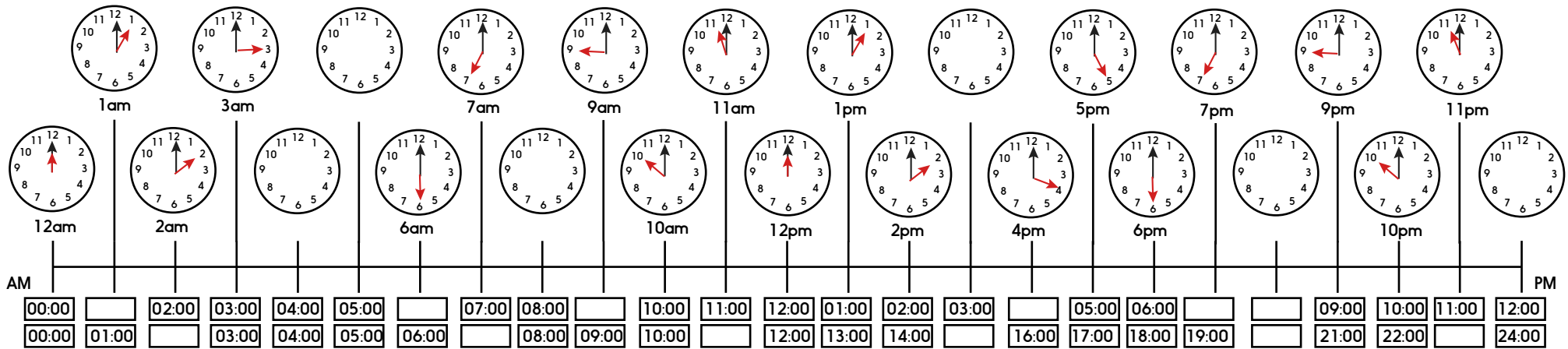
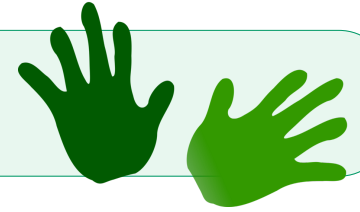
Work in pairs, but record your work on your own sheet

What to do:

Fill in the missing times on the time line.

Things you will need:

- A pencil



S-t-r-e-t-c-h:

Mark on a time between 13:00 and 14:00. Work out how many minutes it is before 2pm.

Mark on a time between 16:00 and 17:00. Work out how much time is left before 8pm.

Mark on a time between 20:00 and 21:00. Work out how much time is left before midnight.

Learning outcomes:

- I can convert times from am/pm to 24-hour clock and vice versa.
- I am beginning to say how long it is to the next hour.

Check your understanding

Questions

Here is the time each child goes to sleep.

Find out what time they each wake up if the first two sleep 9 hours and the second two sleep 9.5 hours.

Amit: asleep at 22:00

Anja: asleep at 21:45

Sunil: asleep at 21:55

Asha: asleep at 22:30

Which of these times would **not** change if you were using 24-hour clock?

- 3 o'clock in the middle of the night.
- Quarter to 2 after lunch
- Midnight
- Twenty past midday.
- 6pm

Use 24-hour clock to write any that *will* change.

Check your understanding

Answers

Here is the time each child goes to sleep.

Find out what time they each wake up if the first two sleep 9 hours and the second two sleep 9.5 hours.

Amit: asleep at 22:00 wakes at 07:00

Anja: asleep at 21:45 wakes at 06:45

Sunil: asleep at 21:55 wakes at 07:25

Asha: asleep at 22:30 wakes at 08:00

Children should be writing the digital times correctly, with 4 digits and a colon separating hours and minutes. A good way to solve these is to count on from the starting time using an empty timeline.

Which of these times would *not* change if you were using 24-hour clock? All change apart from twenty past midday and 3 o'clock in the middle of the night.

Use 24-hour clock to write any that will change:

- 3 o'clock in the middle of the night. 03:00 - doesn't change.
- Quarter to 2 after lunch 13:45.
- Midnight 00:00.
- Twenty past midday. 12:20 – doesn't change.
- 6pm 18:00.