



MATHEMATICS



N.S. Yr. 5 P.89

Use all four operations to solve word problems involving time.

Equipment

Paper, pencil, clock.

MathSphere

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Concepts

Children should be familiar with the units concerned with time and understand times written as 24 hour clock times.

Children should be able to calculate the period between two times and add or subtract a period from a time.

Eg. How long is it between 16:35 and 19:25 ?

Eg. What time is it 37 minutes after 16:55 ?

Eg. What time is it 27 minutes before 13:45. ?

They should be able to use times involving tenths of a second for timing races etc.

They should also be able to explain how they arrived at their answers.

1. Mary left London at 12:45 and arrived in Birmingham at 15:55.
How long did her journey take?
2. Fred started playing a computer game at 14:35. He played for 40 minutes.
At what time did he finish?
3. Georgina put a cake in the oven. It took 45 minutes to cook. She took it out at 12:35. At what time did she put the cake in the oven?
4. A bus left Chichester at 08:50 and arrived in Brighton at 10:55.
How long did the journey take?
5. Harry set his video recorder to begin recording at 13:30 and to stop recording at 15:20.
How long was the program he was recording?
6. The Moon rose at 11:47 and set at 23:50.
For how long was the Moon visible in the sky?
For how long was it not visible?
7. Farzin ran a 100m in 22.4 seconds. Franz ran a 100m in 23.7 seconds.
How much quicker did Farzin run the distance?
8. Mary, Ali, Peter and Mick belonged to a rifle club. They each fired four rounds. Here are their times:

Mary	87.3 seconds
Ali	88.4 seconds
Peter	92.7 seconds
Mick	85.6 seconds

Who was the quickest?
By how much was Ali quicker than Peter?
What was their total time?

Ah, but did they
hit the target?



9. By how much is 37.8 seconds shorter than 56.5 seconds?
10. How long is it from 12:56 on Monday to 13:58 on Thursday?

1. A man began painting a door at 08:50 and finished at 10:30.
How long did it take him to paint the door?
2. Explain what is wrong with this statement:
'Mary played her CDs from 09:63 to 12:50'.
3. Explain what is wrong with this statement:
'A night bus set off at 25.30 and arrived at 02:40'
4. Addy and Subby like to do their exercises at night.
(They are Rats, after all!)
They begin at 23:50 and do 20 minutes on the treadwheel. They then have a rest for 15 minutes and finally do 40 minutes running up and down the stairs. (They are really pleased if they can find any cake crumbs on the way).
At what time do they finish?
5. A marathon lasts from 13:35 to 15:51. How long did it take?
6. A flashing advertising sign is turned on at 22:40 and turned off at 06:30.
For how long is it switched on? For how long is it switched off?
7. Mary and Jean took part in a cross-country race. Mary passed the finishing line after 6 minutes 25.7 seconds. Jean passed the finishing line after 6 minutes 58.8 seconds.
How long was it between Mary crossing the line and Jean crossing the line?
8. Divvy can swim a length of his local pond in 63.8 seconds.
How long would it take him to swim four lengths at the same speed?
9. Multi can write 100 words in 180 seconds.
How long would it take him to write 250 words at the same speed?
10. How long is it from 14:15 on Saturday to 09:30 on Tuesday?

Right, that's the treadwheel done.
Now, where are the stairs?



1. A ferry left Dover at 04:57 and arrived at Calais at 07:05.
How long did the journey take?
2. Fred managed to reach level 4 of his latest computer game after 3 hours and 20 minutes of play.
If he started playing at 09:45, at what time did he reach level 4?
3. Mary left her house at 08:40 and walked to the pier. The walk took her 45 minutes. She stayed at the pier for 2 hours and 35 minutes.
What was the time when she left the pier?
4. Ken took 67 minutes to do his homework. If he finished at 17:37, at what time did he begin?
5. Jenny played her new CD which lasted 56 minutes. It began at 12:48.
At what time was the CD halfway through playing?
6. Grant is a member of an archery club. It takes him 5.6 seconds to load and fire an arrow.
How long would it take him to fire eight arrows at the same rate?
How many arrows could he fire in two minutes?
7. Fran, Robert, Laura and Jock belonged to a running club. They each ran a lap of the track in a relay. Their times were:

Fran	48.7 seconds
Robert	44.6 seconds
Laura	46.2 seconds
Jock	47.3 seconds

Lucky them -
there's only
one of me!



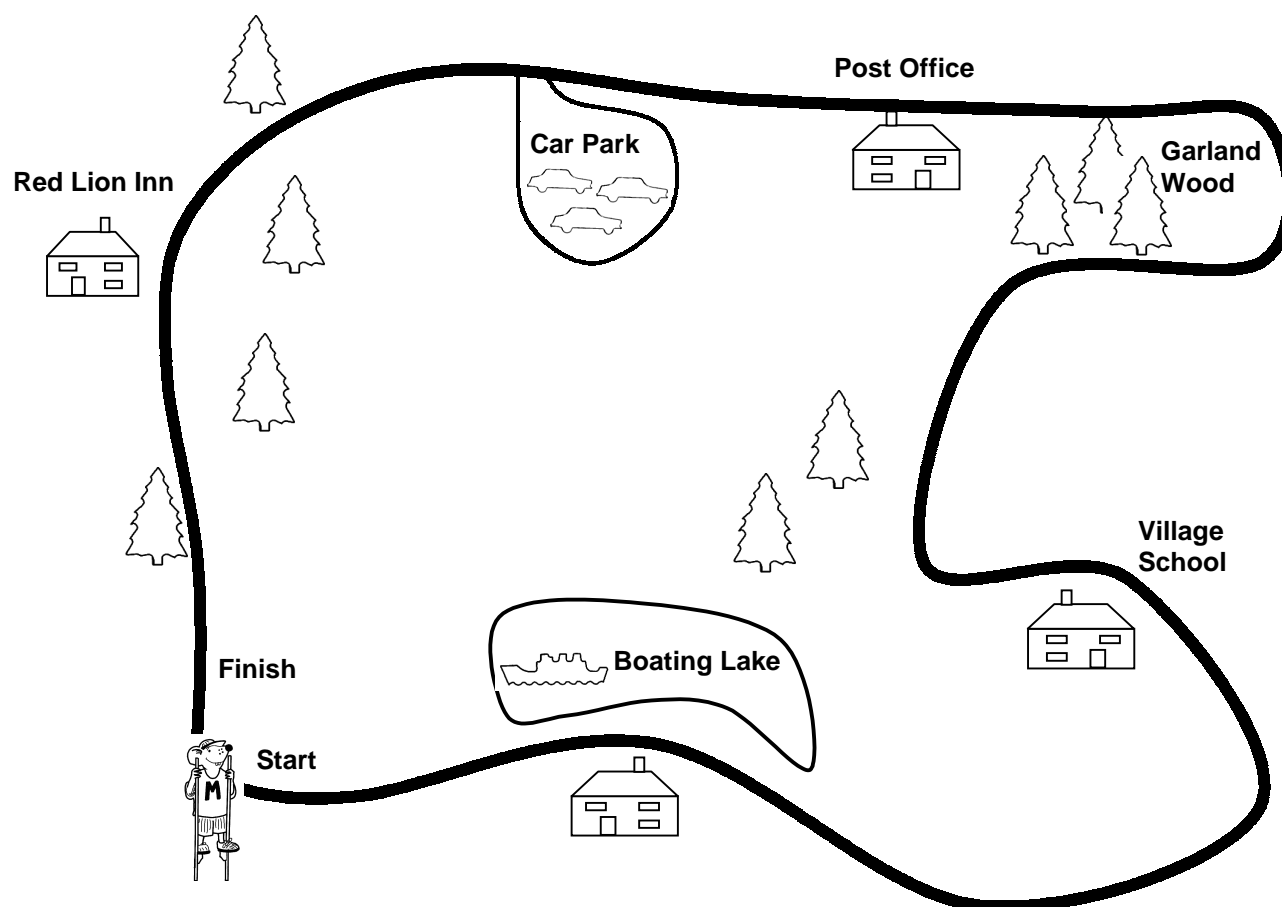
Who was the quickest?

By how much was Laura quicker than Jock?

What was their total time?

8. What is twice 1 minute 25.8 seconds?
9. What is twice 6 minutes 53.8 seconds?
10. How long is it from 09:35 on Sunday to 12:45 on Wednesday?

Addy went on a sponsored stilt walk. Here is a map of his route.

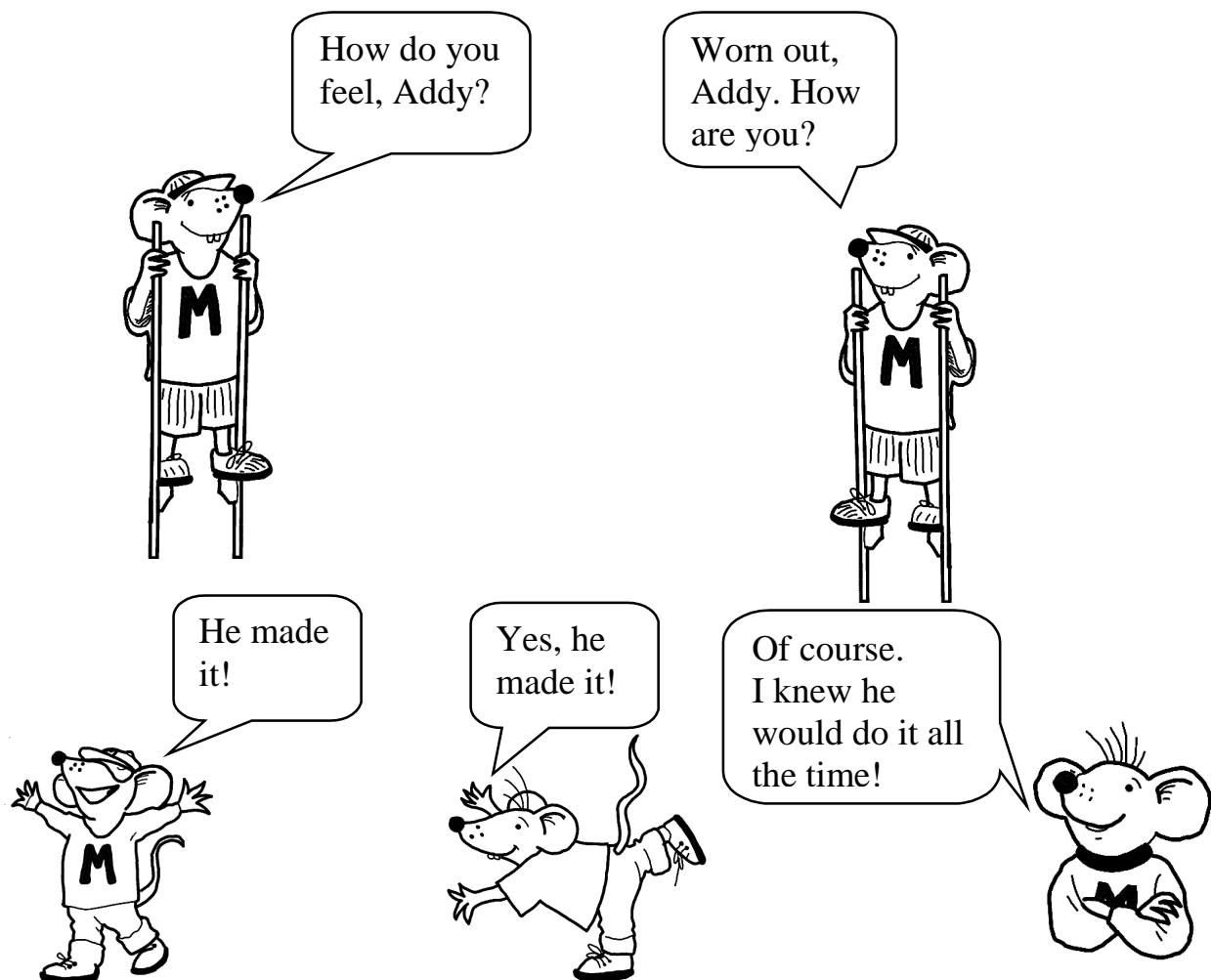


These are the times he arrived and left the places on his route:

Place	Arrived	Left
Start	-----	09:30
Boating Lake	09:55	10:05
Village School	10:48	11:16
Garland Wood	11:59	12:12
Post office	12:30	13:42
Car Park	14:05	14:15
Red Lion Inn	14:50	15:00
Finish	15:30	-----

Answer the questions on the next page.

1. How long did it take **Addy** to walk from the start to the **Boating Lake**?
2. How long did Addy rest at the **Boating Lake**?
3. How long did it take him to walk from the **Village School** to **Garland Wood**?
4. Where do you think Addy had his lunch? Give a reason.
5. Which part of the journey took longer - the part from the **Village School** to **Garland Wood** or the part from the **Post Office** to the **Car Park**?
6. How long did Addy take for the whole journey?
7. If the journey was 12 kilometres long, what was his average speed?



Answers**Page 3**

1. 3 hrs 10 mins 2. 15:15 3. 11:50 4. 2 hrs 5 mins 5. 1 hrs 50 mins
6. 12 hrs 3 mins, 11 hrs 57 mins 7. 1.3 secs 8. Mick, 4.3 secs, 354.0 secs
9. 18.7 secs 10. 3 days 1 hr 2 mins

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1. 1 hr 40 mins 2. There are only 60 mins in one hour
3. There are only 24 hours in one day 4. 01:05 5. 2 hrs 16 mins
6. On 7 hrs 50 mins, Off 16 hrs 10 mins 7. 33.1 secs
8. 255.2 secs (4 mins 15.2 secs) 9. 450 secs (7 mins 30 secs)
10. 2 days 19 hrs 15 mins

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1. 2 hrs 8 mins 2. 13:05 3. 12:00 4. 16.30 5. 13:16
6. 44.8 secs, 21 arrows 7. Robert, 1.1 secs, 186.8 secs
8. 2 mins 51.6 secs 9. 13 mins 47.6 secs
10. 3 days 3 hrs 10 mins

Page 6 and 7

1. 25 mins 2. 10 mins 3. 43 mins
4. Post Office. He was there 1 hr 12 mins
5. Village School to Garland Wood (43 mins as opposed to 23 mins)
6. 6 hrs 7. 2 km/hr