

Reasoning and Problem Solving

Step 8: Comparing the Duration

National Curriculum Objectives:

Mathematics Year 3: (3M4b) [Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks](#)

Mathematics Year 3: (3M4d) [Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight](#)

Mathematics Year 3: (3M4f) [Compare durations of events \[for example to calculate the time taken by particular events or tasks\]](#)

Differentiation:

Questions 1, 4 and 7 (Problem Solving)

Developing Calculate the duration of 2 analogue clocks and 2 digital clocks and compare the two times. Minutes are multiples of 5 and within the hour.

Expected Calculate the duration of 2 analogue clocks and 2 digital clocks and compare the two times. Minutes are multiples of 5 and passing through the hour.

Greater Depth Calculate the duration of 2 analogue clocks and 2 digital clocks and compare the two times. Minutes are to the minute and passing through the hour.

Questions 2, 5 and 8 (Reasoning)

Developing Read the statement comparing 2 durations and determine whether it is correct. Minutes are multiples of 5 and within the hour.

Expected Read the statement comparing 2 durations and determine whether it is correct. Minutes are multiples of 5 and passing through the hour.

Greater Depth Read the statement comparing 2 durations and determine whether it is correct. Minutes are to the minute and passing through the hour.

Questions 3, 6 and 9 (Problem Solving)

Developing Use the information in the timetable to answer the questions. Minutes are multiples of 5 and within the hour.

Expected Use the information in the timetable to answer the questions. Minutes are multiples of 5 and passing through the hour.

Greater Depth Use the information in the timetable to answer the questions. Minutes are to the minute and passing through the hour.

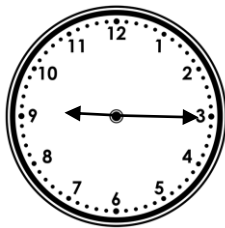
More [Year 3 Time](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

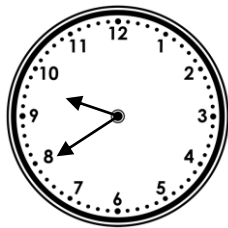
Comparing the Duration

Comparing the Duration

1a. How much time has passed on the analogue clocks?
How much time has passed on the digital clocks?
What is the difference between the durations?



10:25

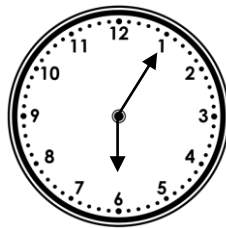


10:45



PS

1b. How much time has passed on the analogue clocks?
How much time has passed on the digital clocks?
What is the difference between the durations?



08:05



08:55



PS

2a.

The train left at 9:00. It arrived in Leeds at 9:40. It took me longer than Joey to get to Leeds.



Sienna



Joey

It took me 45 minutes on the bus to get to Leeds.

Is Sienna correct? Explain why.



R

2b.



Mikey

I left home at 16:05 and arrived at the shops at 16:50. It took me less time than Remi to get to the shops.



Remi

It took me 35 minutes to walk to the shops.

Is Mikey correct? Explain why.



R

3a. How much longer does the journey from Islay to the Isle of Arran take on Ferry B than Ferry A?

Would it be quicker to get to Mull from Skye on Ferry A or Ferry B?

Ferry	Skye	Islay	Mull	Isle of Arran
A	8:05	8:20	8:35	8:55
B	9:10	9:15	9:45	9:55



PS

3b. How much shorter is the journey from the bank to the food hall on Bus 1 than Bus 2?

Would it be quicker to get to the bank from the Main Street on Bus 1 or Bus 2?

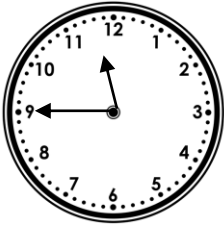
Bus	Main Street	Cinema	Bank	Food Hall
1	15:10	15:25	15:40	15:50
2	16:00	16:20	16:35	16:55



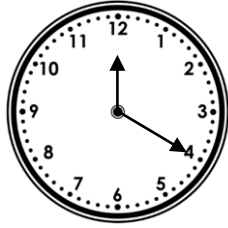
PS

Comparing the Duration

4a. How much time has passed on the analogue clocks?
How much time has passed on the digital clocks?
What is the difference between the durations?



12:55



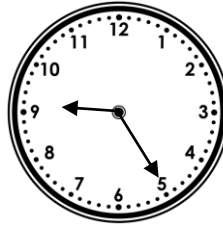
13:25



PS

Comparing the Duration

4b. How much time has passed on the analogue clocks?
How much time has passed on the digital clocks?
What is the difference between the durations?



08:35



09:25



PS

5a. I left home at 07:50 and arrived at school for 08:20. It took me longer than Tyler to get to school.



Harriet



Tyler

It took me 25 minutes to get to school.

Is Harriet correct? Explain why.



R

5b. I left school at 14:55 and arrived at the library at 15:40. It took me less time than Nadia to get to the library.



Marcel

I left school at 14:55 and arrived at the library at 15:40. It took me less time than Nadia to get to the library.

It took me 55 minutes to walk to the library.



Nadia

Is Marcel correct? Explain why.



R

6a. How much longer does the journey from Blackpool to South Pier take on Tram A than Tram B?
Is it quicker to get to the Pleasure Beach from the North Pier using Tram A or Tram B?
What is the difference?

Tram	North Pier	Blackpool Tower	Pleasure Beach	South Pier
A	12:00	12:15	12:40	13:10
B	14:20	14:35	14:45	15:05



PS

6b. How much shorter is the journey on from Halifax to Bradford on Train 1 than Train 2?
Is it quicker to get to York from Bradford using Train 1 or Train 2?
What is the difference?

Bus	Halifax	Bradford	Leeds	York
1	13:00	13:25	13:40	14:15
2	15:05	15:35	15:40	16:10

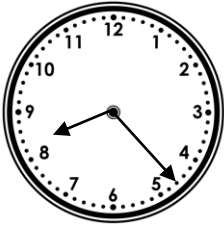


PS

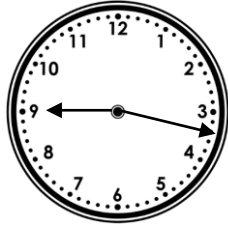
Comparing the Duration

Comparing the Duration

7a. How much time has passed on the analogue clocks?
How much time has passed on the digital clocks?
What is the difference between the durations?



09:17



10:22

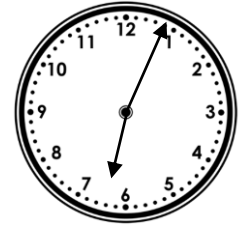


PS

7b. How much time has passed on the analogue clocks?
How much time has passed on the digital clocks?
What is the difference between the durations?



13:37



14:46



PS

8a. The bus left at 09:13 and arrived in Brighouse at 10:32. It took me longer to get there than Asha.



Tiana



Asha

It took me 1 hour and 12 minutes to get to Brighouse by car.

Is Tiana correct? Explain why.



R

8b. I started the race at 17:08 and finished the race at 18:17. It took me less time to run the race than it took Noel.



Olivia

I started the race at 17:08 and finished the race at 18:17. It took me less time to run the race than it took Noel.

It took me 1 hour and 5 minutes to run the race.



Noel

Is Olivia correct? Explain why.



R

9a. Which train would get from Shipley to Skipton the quickest?

How much longer does Train A take to get from Ilkley to Settle than Train B?

Train	Shipley	Ilkley	Skipton	Settle
A	11:35	11:56	12:22	12:52
B	13:02	13:34	13:55	14:21
C	14:56	15:21	15:52	16:14



PS

9b. Which plane would get from Gatwick to Dublin the quickest?

How much longer does it take Plane 3 to get from Cardiff to Dublin than Plane 2?

Plane	Gatwick	Cardiff	Dublin	Glasgow
1	07:05	07:51	08:47	09:34
2	09:54	10:32	10:58	11:56
3	12:02	12:42	13:37	14:10



PS

Reasoning and Problem Solving Comparing the Duration

Developing

- 1a. Analogue – 25 minutes. Digital – 20 minutes. The difference is 5 minutes.
- 2a. Sienna is not correct; it took her 40 minutes, which is 5 minutes fewer than Joey.
- 3a. Ferry A = 35 minutes, Ferry B = 40 minutes. 5 minutes difference.
Ferry A = 30 minutes, Ferry B = 35 minutes.
Ferry A is quicker.

Expected

- 4a. Analogue – 35 minutes. Digital – 30 minutes. The difference is 5 minutes.
- 5a. Harriet is correct; it took her 30 minutes, which is 5 minutes more than Tyler.
- 6a. Tram A = 55 minutes, Tram B = 30 minutes. 25 minutes difference.
Tram A = 40 minutes, Tram B = 25 minutes.
Tram B is quicker.

Greater Depth

- 7a. Analogue – 54 minutes. Digital – 1 hour and 5 minutes. The difference is 11 minutes.
- 8a. Tiana is correct; it took her 1 hour and 19 minutes, which is 7 minutes more than Asha.
- 9a. Train A = 47 minutes, Train B = 53 minutes, Train C = 56 minutes. Train A is the quickest.
Train A = 56 minutes, Train B = 47 minutes.
9 minutes difference.

Reasoning and Problem Solving Comparing the Duration

Developing

- 1b. Analogue – 30 minutes. Digital – 50 minutes. The difference is 20 minutes.
- 2b. Mikey is not correct; it took him 45 minutes, which is 10 minutes longer than Remi.
- 3b. Bus 1 = 10 minutes, Bus 2 = 20 minutes. 10 minutes difference.
Bus 1 = 30 minutes, Bus 2 = 35 minutes. Bus 1 is quicker.

Expected

- 4b. Analogue – 45 minutes. Digital – 50 minutes. The difference is 5 minutes.
- 5b. Marcel is correct; it took him 45 minutes, which is 10 minutes fewer than Nadia.
- 6b. Train 1 = 25 minutes, Train 2 = 30 minutes. 5 minutes difference.
Train 1 = 50 minutes, Train 2 = 35 minutes.
Train 2 is quicker.

Greater Depth

- 7b. Analogue – 1 hour and 8 minutes. Digital – 1 hour and 9 minutes. The difference is 1 minute.
- 8b. Olivia is not correct; it took her 1 hour and 9 minutes, which is 4 minutes longer than Noel.
- 9b. Plane 1 = 1 hour and 42 minutes, Plane 2 = 1 hour and 4 minutes, Plane 3 = 1 hour and 35 minutes. Plane 2 is the quickest.
Plane 2 = 26 minutes. Plane 3 = 55 minutes.
29 minutes difference.