

Reasoning and Problem Solving

Step 9: Start and End Times

National Curriculum Objectives:

Mathematics Year 3: (3M4d) [Estimate and read time with increasing accuracy to the nearest minute](#)

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 (Reasoning)

Developing Complete the table to find the odd one out when given a duration of up to one hour. Times in increments of 5 minutes. 12 hour analogue and digital clocks used.

Expected Complete the table to find the odd one out when given a duration of up to two hours. Times in increments of 5 minutes. 12 and 24 hour analogue and digital clocks used.

Greater Depth Complete the table to find the odd one out when given any duration. Times in increments of 1 minute. 12 and 24 hour analogue and digital clocks used with some crossing between AM and PM.

Questions 2, 5 and 8 (Problem Solving)

Developing Find possible start or end times using given digit cards when given a duration of up to one hour. Times in increments of 5 minutes. 12 hour analogue and digital clocks used.

Expected Find possible start or end times using given digit cards when given a duration of up to two hours. Times in increments of 5 minutes. 12 and 24 hour analogue and digital clocks used.

Greater Depth Find possible start or end times using given digit cards when given any duration. Times in increments of 1 minute. 12 and 24 hour analogue and digital clocks used with some crossing between AM and PM.

Questions 3, 6 and 9 (Reasoning)

Developing Decide whether a statement is correct and explain why when given a duration of up to one hour. Times in increments of 5 minutes. 12 hour analogue and digital clocks used.

Expected Decide whether a statement is correct and explain why when given a duration of up to two hours. Times in increments of 5 minutes. 12 and 24 hour analogue and digital clocks used.

Greater Depth Decide whether a statement is correct and explain why when given any duration. Times in increments of 1 minute. 12 and 24 hour analogue and digital clocks used with some crossing between AM and PM.

More [Year 3 Time](#) resources.

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

Start and End Times

1a. Complete the table. Which programme is the odd one out?

TV Show	Start time	Duration	End time
In The Garden		35 minutes	11:00am
Paw Police		15 minutes	12:05pm
The Super Six		50 minutes	11:15am

Explain your reasoning.



R

Start and End Times

1b. Complete the table. Which programme is the odd one out?

TV Show	Start time	Duration	End time
Bottom Gear	12:10pm	55 minutes	
The U Factor	12:50pm	15 minutes	
Bake Over	1:05pm	40 minutes	

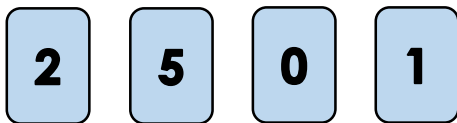
Explain your reasoning.



R

2a. Davina wants to know what time she arrived at school. She left home at 7:30am and the journey lasted less than an hour.

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Using each card once, arrange the digit cards to show what time she could have arrived. Find 3 possible answers.



PS

2b. Hans wants to know what time he left school to walk home. The walk lasted less than 30 minutes and he arrived home at 4.10pm.

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Using each card once, arrange the digit cards to show what time he could have left. Find 3 possible answers.



PS

3a. Hafsa started playing a game at 5:20pm. She played for 45 minutes.



Hafsa

I finished at 5:05pm because 40 minutes takes me until the next hour with 5 minutes left over.

Is she correct? Explain your reasoning.



R

3b. Chuan went to an exercise class. It finished at 7:10pm and lasted for 30 minutes.



Chuan

I know that it started at 6:20pm because $30 - 10 = 20$

Is he correct? Explain your reasoning.



R

Start and End Times

4a. Complete the table. Which programme is the odd one out?

TV Show	Start time	Duration	End time
Terrible Histories		1 hour 25 minutes	09:50
Andy's House	8:35am	1 hour 15 minutes	
Art Defender	21:00	50 minutes	

Explain your reasoning.



PS

Start and End Times

4b. Complete the table. Which programme is the odd one out?

TV Show	Start time	Duration	End time
Helena Horse	14:30	1 hour 55 minutes	
News Rectangle		1 hour 25 minutes	16:05
Sarah in the Middle		1 hour 15 minutes	4:25pm

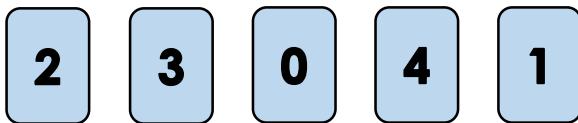
Explain your reasoning.



PS

5a. Katie wants to know what time she arrived at the seaside. She left home at 12:15 and the journey lasted between 1 hour and 1 hour 30 minutes.

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Using each card once, arrange the digit cards to show what time she could have arrived. Find 3 possible answers.



PS

5b. Jilani wants to know what time he left home to go to the park. The journey lasted between 1 and 2 hours and he arrived at the park at 17:20.

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Using each card once, arrange the digit cards to show what time he could have left. Find 3 possible answers.



PS

6a. Steph set off hiking at 25 minutes past eight in the morning. She hiked for 1 hour and 50 minutes.



Steph

I finished at 10:15 because 2 hours later will be 10:25 then I took off 10 minutes.

Is she correct? Explain your reasoning.



R

6b. Sean put his cookies in the oven at 14:45. They need to bake for 45 minutes.



Sean

I know that the cookies will be ready at 14:90 because $45 + 45 = 90$

Is he correct? Explain your reasoning.



R

Start and End Times

7a. Complete the table. Which programme is the odd one out?

TV Show	Start time	Duration	End time
Giggle Vision	9:42am	1 hour 16 minutes	
Blue Paula	8:36am	2 hours 4 minutes	
Danger Rabbit		2 hours 14 minutes	10:58

Explain your reasoning.



PS

Start and End Times

7b. Complete the table. Which programme is the odd one out?

TV Show	Start time	Duration	End time
The Song		73 minutes	7:50pm
Little Sister	6:37am	1 hour 59 minutes	
3 Years Later		2 hours 13 minutes	20:50

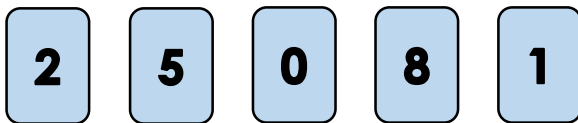
Explain your reasoning.



PS

8a. Juliet wants to know what time she left home. She arrived at the campsite at twenty to eight in the evening and the journey lasted between 1 and 2 hours.

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Using each card once, arrange the digit cards to show what time she could have left. Find 3 possible answers.



PS

8b. Hassan wants to know what time he left his friends to go home. The journey lasted between 1 and 2 hours and he arrived home at 16:21.

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Using each card once, arrange the digit cards to show what time he could have left. Find 3 possible answers.



PS

9a. Alice started kayaking at quarter to three in the afternoon. Her kayaking journey took 74 minutes.



Alice

I finished at 3:59am because $74 - 15 = 59$ so this is 59 minutes past the next hour.

Is she correct? Explain your reasoning.



R

9b. Gabriel is making a lasagne. He put it into the oven at 7:13pm. It took 1 hour 2 minutes to prepare.



Gabriel

I started preparing at 20:15 because this is 1 hour 2 minutes later.

Is he correct? Explain your reasoning.



R

Reasoning and Problem Solving Start and End Times

Developing

1a. 10:25am, 11:50am, 10:25am. Paw Police is the odd one out as it does not start at 10:25am.

2a. Various possible answers; for example: 8:05, 8:10, 8:15, 8:20, 8:25.

3a. Hafsa is incorrect because she has forgotten to change to the next hour. The correct answer is 6:05pm.

Expected

4b. 08:25, 9:50am, 21:50. Art Defender is the odd one out as it ends at 9:50pm not 9:50am.

5b. Various possible answers; for example: 12:35, 12:45, 13:05, 13:15, 13:25, 13:45

6b. Steph is correct. 1 hour and 50 minutes later will be 10:15.

Greater Depth

7b. 10:58am, 10:40am, 08:44. Blue Panda is the odd one out as it ends at 10:40am not 10:58am.

8b. Various possible answers; for example: 18:02, 18:05, 18:20, 18:15, 18:50, 18:52.

9b. Alice is incorrect. She started the hike in the afternoon so she will finish at 3:59pm not 3:59am.

Reasoning and Problem Solving Start and End Times

Developing

1b. 1:05pm, 1:05pm, 1:45pm. Bake Over is the odd one out as it does not end at 1:05pm.

2b. Various possible answers; for example: 3:45, 3:55, 4:05.

3b. Chuan is incorrect because he needed to count backwards by 30 minutes. The correct answer is 6:40pm.

Expected

4b. 16:25, 14:40, 3:10pm. News Rectangle is the odd one out as it ends at 16:05 not 16:25.

5b. Various possible answers; for example: 15:25, 15:35, 15:45, 15:55.

6b. Sean is incorrect because he has forgotten to change to minutes into hours and minutes once he reached 60 minutes. The correct time is 15:30.

Greater Depth

7b. 6:37pm, 8:36am, 18:37. Little Sister is the odd one out as it starts at 6:37am not 6:37pm.

8b. Various possible answers; for example: 14:31, 14:35, 14:53, 15:13.

9b. Gabriel is incorrect. He needs to work out the time 1 hour 2 minutes earlier not later. The correct time is 6:11pm.