

# Discussion Problems

## Step 1: Hours Minutes and Seconds

### National Curriculum Objectives:

Mathematics Year 4: (4M4c) [Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days](#)

### About this resource:

This resource has been designed for pupils who understand the concepts within [this step](#). It provides pupils with more opportunities to enhance their reasoning and problem solving skills through more challenging problems. Pupils can work in pairs or small groups to discuss with each other about how best to tackle the problem, as there is often more than one answer or more than one way to work through the problem.

There may be various answers for each problem. Where this is the case, we have provided one example answer to guide discussion.

We recommend self or peer marking using the answer page provided to promote discussion and self-correction.

More [Year 4 Time](#) resources.

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

# Hours Minutes and Seconds

1. Dom is conducting an experiment to see how quickly different objects react to heat. Afterwards, he groups them into three different groups.

Explore different ways he could have grouped them based on the timings that he found.



2 minutes  
55 seconds



15 seconds



56 seconds



119  
seconds



1 minute  
16 seconds



138  
seconds



126  
seconds



21 seconds



1 minute  
8 seconds

DP

2. Laura-Lee is planning some activities to do whilst visiting a theme park. Below is a timetable showing how long each activity will take on each day. She only has 7 hours at the theme park and will need to spend 45 minutes for lunch.

Investigate which day she should visit and explain why.

	Monday	Tuesday	Wednesday
Crazy-Kartz	90 minutes	1 hour	75 minutes
Swim Adventure	60 minutes	68 minutes	45 minutes
Pirate Escape	1 hour 5 minutes	72 minutes	1 hour
House of Tricks	1 hour	1 hour 12 minutes	82 minutes
Paintball	2 hours 2 minutes	1 hour 38 minutes	2 hours



DP

# Hours Minutes and Seconds

1. Dom is conducting an experiment to see how quickly different objects react to heat. Afterwards, he groups them into three different groups.

Explore different ways he could have grouped them based on the timings that he found.



2 minutes  
55 seconds



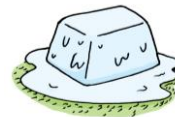
15 seconds



56 seconds



119  
seconds



1 minute  
16 seconds



138  
seconds



126  
seconds



21 seconds



1 minute  
8 seconds

Various possible answers, for example:

Dom could have grouped them into a group that reacted in under 30 seconds, a group that reacted under a minute (but more than 30 seconds) and a group that took longer than a minute to react.

DP

2. Laura-Lee is planning some activities to do whilst visiting a theme park. Below is a timetable showing how long each activity will take on each day. She only has 7 hours at the theme park and will need to spend 45 minutes for lunch.

Investigate which day she should visit and explain why.

	Monday	Tuesday	Wednesday
Crazy-Kartz	90 minutes	1 hour	75 minutes
Swim Adventure	60 minutes	68 minutes	45 minutes
Pirate Escape	1 hour 5 minutes	72 minutes	1 hour
House of Tricks	1 hour	1 hour 12 minutes	82 minutes
Paintball	2 hours 2 minutes	1 hour 38 minutes	2 hours



Laura-Lee should decide to visit the theme park on Tuesday because it will allow her to do all the activities listed and eat her lunch without running out of time.

Monday – total time needed = 442 minutes or 7 hours and 22 minutes.

Tuesday – total time needed = 415 minutes or 6 hours and 55 minutes.

Wednesday – total time needed = 427 minutes or 7 hours and 7 minutes.

DP