

Reasoning and Problem Solving

Time – Year 4

About This Resource

This resource is aimed at Year 4 Expected and has been designed to give children the opportunity to consolidate the skills they have learned Summer Block 3 Time.

The questions are based on a selection of the same ‘small steps’ that are addressed in the block, but are presented in a different way so children can work through the pack independently and demonstrate their understanding and skills.

Small Steps

Hours, minutes and seconds
Years, months, weeks and days
Analogue to digital – 12 hour
Analogue to digital – 24 hour

National Curriculum Objectives

Mathematics Year 4: (4M4a) [Read, write and convert time between analogue and digital 12-hour clocks](#)

Mathematics Year 4: (4M4b) [Read, write and convert time between analogue and digital 24-hour clocks](#)

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

Mathematics Year 4: (4M5) [Convert between different units of measurement \(for example, kilometre to metre; hour to minute\)](#)

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Welcome to Brentwell Airport!

Brentwell Airport welcomes thousands of people each year who are travelling to and from many different countries around the world.

A lot of organisation is needed for the airport to run smoothly. For this to happen, there are lots of Clocks, timetables and people doing important jobs.



One important person in the airport is the air traffic controller. They make sure that the planes take off and land safely and on time. They work in a tall tower so that they can see all of the planes landing and taking off.

1. Below is a flight timetable. Look at the analogue clocks for the departure times and how long the flight takes. All times are after midday. Place the planes in the order that they arrive and complete the arrival times in the digital 12 hour clock.



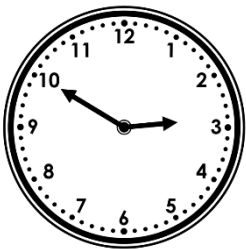
Paris

1hr 50mins



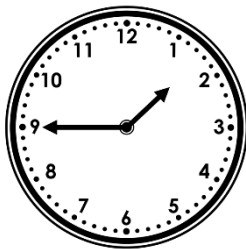
Berlin

2hrs 15mins



Malaga

3hrs 20mins



Athens

3hrs 35mins

Flight	Arrival Time

2. What is the difference in arrival time between the Athens and Paris flight? Give your answer in minutes.

Every passenger who travels through an airport has to go through a security scanner to ensure that they are not carrying anything dangerous.

Passengers sometimes have to wait for long periods of time at the airport so there are cafes and shops to keep people happy.

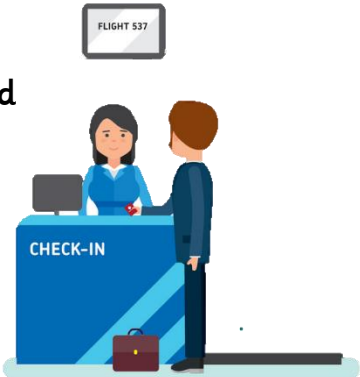


3. Jack is travelling to Lisbon. Below is list of all the things he needs to do in order to catch his plane on time and how long each will take. Write the times that Jack will finish each activity.

Things To Do	Time Taken	Finish Time
Arrive at airport	-	8:25am
Check in	17 minutes	
Go through security	28 minutes	
Have lunch	1 hour 20 minutes	
Walk to gate	13 minutes	
Board plane	9 minutes	

4. How long does it take Jack to complete all of the activities? Give you answer in hours and minutes.

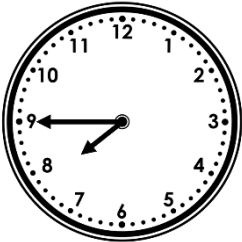
5. Oh dear! Jack receives an email telling him that the time for his plane has changed. His plane is due to take off at 2:05pm. He lives 135 minutes away from the airport. Jack thinks he needs to leave at 9:20am. Is he correct? How late or early would he be? Prove it.



✓ DEPARTURES			
TIME	TO	FLIGHT	GATE
20 20	LONDON	AV 237	17
20 45	HELSINKI	BD 327	8
20 55	MOSCOW	SQ 214	23
21 15	PARIS	SG 394	12
21 30	MILAN	HR 543	8
21 40	AMSTERDAM	TY 339	11
21 55	LOS ANGELES	AS 742	10
22 05	CARACAS	DN 923	4

6. Oh no! Geese have been found on the runway and need to be moved! The 20:20 plane to London has been delayed for 72 minutes so that the geese can be safely moved. What is the new time that the plane leaves? Give your answer in digital 24 hour clock.

7. The time is now:



PM

How long do the passengers have to wait for their plane to leave?

8. Logan is late for his plane! It will take him 425 seconds to get to the gate. The time is now:



PM

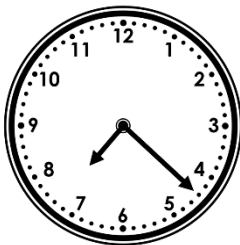
Boarding closes at 13:11. Will he catch the plane in time? Explain how you know.

9. Logan realises his watch stopped 240 seconds ago! He thinks he will still have time to catch his plane. Is he correct? Explain how you know.



Another job in an airport is keeping track of all of the luggage. Luggage is unloaded from the plane and put onto a conveyor belt and then passengers collect their bags and suitcases from a carousel.

10. Luggage is loaded onto the carousel at:



AM

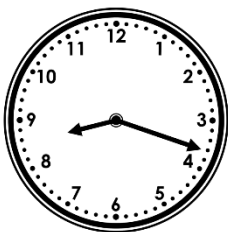


It takes 8 minutes to unload all of the luggage. What time will all of the luggage be on the carousel? Give your answer in the 12 hour digital clock.

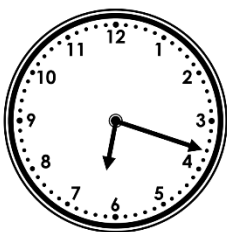
How many seconds has it taken?

11. It takes 30 seconds to unload 23 pieces of luggage. How many pieces of luggage have been unloaded?

12. The clocks below show the starting times for luggage being unloaded. Complete the table. Write your answers in the 24 hour digital clock.



A (am)



B (pm)



C (am)



D (pm)

Carousel	Start Time	Duration	End Time
A		13 minutes	
B		9 minutes	
C		6 minutes	
D		11 minutes	





Planes fly to different places at different times of the year depending on the season.

13. The table below shows when the summer season starts for some flights. Calculate how many days each season lasts for.

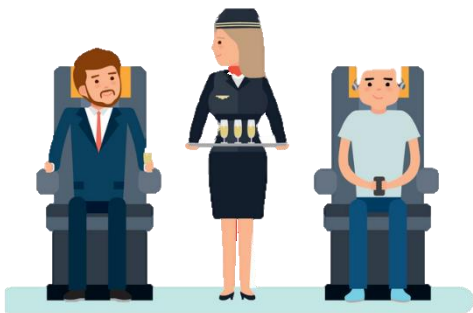
Destination	Season Duration (weeks)	Season Duration (days)
Florida	4 weeks 9 days	
Tenerife	6 weeks	
Majorca	7 weeks 4 days	

14. The table below shows when the winter season starts. How many weeks and days can you fly to each destination?

Destination	Season Duration (weeks)	Season Duration (days)
Vancouver		69 days
Copenhagen		72 days
Helsinki		87 days

15. Flights to Singapore start on 28th May and finish on 19th July. How many days can you fly there?

16. Flights to Cape Town last for 5 weeks and 3 days. If the start date was 6th July, what date would the last flight be on?



Cabin crew are the people who keep you safe whilst you are flying. They give safety demonstrations and look after you with food and drink throughout the flight.

17. The table below shows how long members of the cabin crew have worked for the airline. Complete the table.

Cabin Crew	Length of Time (years and months)	Length of Time (months)
Lorraine	2 years 3 months	
Daniel		42 months
Jaxon	5 years 8 months	

Before you board your plane and once you have landed, your passport is checked by Passport Control. This is to keep track of who enters and leaves a country.



18. Archie has been working for Passport Control for twice as long as Jameela. Jameela has been working for 16 months fewer than Esme. Esme has been working at the airport for 3 years. How long have Archie and Jameela been working there? Give your answer in years and months.



Reasoning and Problem Solving – Time – Year 4

1. Athens – 5:20pm; Malaga – 6:10pm; Berlin – 7:05pm; Paris – 8:45pm

2. 205 minutes

3.

Check in	17 minutes	8:42
Go through security	28 minutes	9:10
Have lunch	1 hour 20 minutes	10:30
Walk to gate	13 minutes	10:43
Board plane	9 minutes	10:52

4. 2 hours 27 minutes

5. No, Jack is incorrect. He would be 3 minutes early. $147 + 135 = 282$ minutes
 $282\text{mins} = 4$ hours 42 minutes. $9:20\text{am} + 4$ hours 42 minutes = 2:02pm.

6. 21:32

7. 1 hour 47 minutes

8. Yes, Logan will catch the plane. Time = 13:02. 425 seconds = 7 minutes 5 seconds.
 $13:02 + 7$ minutes = 13:09

9. No, Logan would miss his plane. 240 seconds = 4 minutes. $13:09 + 4$ minutes = 13:13.

10. 7:30; 480 seconds

11. 368 pieces of luggage

12.

A	08:18	13 minutes	08:31
B	18:18	9 minutes	18:27
C	04:26	6 minutes	04:32
D	20:31	11 minutes	20:42

13. Florida – 37 days; Tenerife – 42 days; Majorca – 53 days

14. Vancouver – 9 weeks 6 days; Copenhagen – 10 weeks 2 days; Helsinki – 12 weeks 3 days

15. 53 days

16. 14th July

17. Lorraine – 27 months; Daniel – 3 years 6 months; Jaxon – 68 months

18. Esme – 36 months; Jameela – 1 year 8 months; Archie – 3 years 4 months.