

A close-up photograph of several green fern fronds. The fronds are long and feathery, with many small, pointed leaflets. They are set against a dark, blurred background, which makes the green color of the ferns stand out. The lighting is soft, highlighting the texture of the leaflets.

RICH MATHEMATICAL TASK BOOKLET

MEASUREMENT TIME

YEAR 7-8 EVEN YEARS

Copy Masters

Task 1

Record 6 things you all do over 24 hours.

Record what time you start and finish each of these things in hours and minutes on a 24-hour clock. Record the duration of each of these things, in minutes, hours and seconds.

Now make a timeline which shows the start and finish and duration of each of these activities.

Match the start and finish time with what they would look like on an analogue clock.

*Year 7-8 Time – Even Years***Task 1 (independent)**

Create a timeline for these birthdays

- 18 December 2026
- 29 October 2025
- 13 March 2026
- 17 February 2025
- 30 June 2025
- 27 June 2026
- 18 March 2025

What is the difference in time between your first date on the timeline and the mid-point date?

What is the difference in time between your first and last dates in months and days?

Task 2

Represent your answers on both an analogue clock and a 24-hour clock.



1. Our umukai was put down seven and a quarter hours ago. If it is 12.15 P.M now, what time was it put down? It needs another four and a half hours to finish cooking. What time will it be lifted?
2. If the umukai was put down at 4:45, what time would it be lifted if it needs 11 and a half hours to cook?
3. If the women started preparing all the other food for the umukai at 9:55 the previous day and finished preparing it at 18.17, how long had the preparation taken?

Year 7-8 Time – Even Years

Task 2 (independent)



Every year our school has a fiafia night.

If it starts at 5.45 P.M. and goes for 2 hours and 22 minutes. What time does it end?

At the school down the road their fiafia night starts at 18.55 and goes until 20.17.

Which school has a longer fiafia night?

Task 3

Emilia and Freya are running in the local 5km parkrun.

Emilia crosses the start line at 8:00 am. Her time for each kilometre is:

- 1 km – 6 minutes 21 seconds
- 2 km – 6 minutes 36 seconds
- 3 km – 6 minutes 42 seconds
- 4 km – 6 minutes 30 seconds
- 5 km – 6 minutes 11 seconds

Freya started at the back of the group and crosses the start line at 8:06 am. Her time for each kilometre is:

- 1 km – 5 minutes 41 seconds
- 2 km – 5 minutes 45 seconds
- 3 km – 5 minutes 42 seconds
- 4 km – 5 minutes 46 seconds
- 5 km – 5 minutes 30 seconds

Who finished the park run first?

*Year 7-8 Time – Even Years***Task 3 (independent)**

These are the race results from a Formula 1 race. How long did Lando Norris and Charles Leclerc take to complete the race?

POS.	NO.	DRIVER	TEAM	LAPS	TIME / RETIRED
1	1	 Max Verstappen	 Red Bull Racing	56	1:34:00.161
2	4	 Lando Norris	 McLaren	56	+7.959s
3	16	 Charles Leclerc	 Ferrari	56	+15.373s

Task 4

Losi needs to accompany her Nan to the Hastings hospital for an appointment. They are going to take the bus from Flaxmere. The closest stop is opposite 292 Flaxmere Avenue.

The Hospital appointment is at 10.30 and should take about an hour. Nan has said that they can then go to Kmart at Bay Plaza as a thank you for helping out today. They will also have some lunch at Bay Plaza and then go home to Flaxmere.

Using the bus timetable, create a plan for Losi and her Nan showing where and what time they need to catch the bus at each stop and what time they will get home. Show how long they will spend at the hospital and at Bay Plaza.

Year 7-8 Time – Even Years

Task 4 (resource)

Hastings Library, Eastbourne Street	7:45 am	7:50 am	7:55 am	7:58 am	8:01 am	8:03 am	8:15 am	8:16 am	8:20 am	8:22 am	8:30 am	8:32 am	8:37 am
Outside Hawke's Bay Hospital, Omahu Road	8:15 am	8:20 am	8:25 am	8:28 am	8:31 am	8:33 am	8:45 am	8:46 am	8:50 am	8:52 am	9:00 am	9:02 am	9:07 am
Opposite 10 Wilson Road	9:05 am	9:10 am	9:15 am	9:18 am	9:21 am	9:23 am	9:35 am	9:36 am	9:40 am	9:42 am	9:50 am	9:52 am	9:57 am
Opposite Police Station, Swansea Road	9:35 am	9:40 am	9:45 am	9:48 am	9:51 am	9:53 am	10:05 am	10:06 am	10:10 am	10:12 am	10:20 am	10:22 am	10:27 am
Opposite 292 Flaxmere Avenue	10:05 am	10:10 am	10:15 am	10:18 am	10:21 am	10:23 am	10:35 am	10:36 am	10:40 am	10:42 am	10:50 am	10:52 am	10:57 am
Swansea Road	10:35 am	10:40 am	10:45 am	10:48 am	10:51 am	10:53 am	11:05 am	11:06 am	11:10 am	11:12 am	11:20 am	11:22 am	11:27 am
Opposite Service Station, Village	11:05 am	11:10 am	11:15 am	11:18 am	11:21 am	11:23 am	11:35 am	11:36 am	11:40 am	11:42 am	11:50 am	11:52 am	11:57 am
82 Folkestone Drive	11:35 am	11:40 am	11:45 am	11:48 am	11:51 am	11:53 am	12:05 pm	12:06 pm	12:10 pm	12:12 pm	12:20 pm	12:22 pm	12:27 pm
325 Omahu Road, opposite Hawke's Bay Hospital	12:05 pm	12:10 pm	12:15 pm	12:18 pm	12:21 pm	12:23 pm	12:35 pm	12:36 pm	12:40 pm	12:42 pm	12:50 pm	12:52 pm	12:57 pm
KFC, Heretaunga Street	1:05 pm	1:10 pm	1:15 pm	1:18 pm	1:21 pm	1:23 pm	1:35 pm	1:36 pm	1:40 pm	1:42 pm	1:50 pm	1:52 pm	1:57 pm
Bay Plaza, Russell St	1:35 pm	1:40 pm	1:45 pm	1:48 pm	1:51 pm	1:53 pm	2:05 pm	2:06 pm	2:10 pm	2:12 pm	2:20 pm	2:22 pm	2:27 pm
Opposite the Warehouse, Karamu Road	2:05 pm	2:10 pm	2:15 pm	2:18 pm	2:21 pm	2:23 pm	2:35 pm	2:36 pm	2:40 pm	2:42 pm	2:50 pm	2:52 pm	2:57 pm
Hastings Library, Eastbourne Street	2:35 pm	2:40 pm	2:45 pm	2:48 pm	2:51 pm	2:53 pm	3:05 pm	3:06 pm	3:10 pm	3:12 pm	3:20 pm	3:22 pm	3:27 pm

Task 4 (independent)

Use your local bus timetable to plan a trip from your house.

You must include going to a movie (note - you will need a movie timetable)

Your choice of two more activities.

You will need to include the times and duration of each activity, as well as the duration of the bus rides.

Task 5

What is the time difference?

- You get up at 6.16 A.M. and you go to bed at 9.05 P.M?
- You go to the library at 12:47 and you leave it at 13: 25?
- You have dinner at 6.39 P.M., and you clear the table at 19:21?
- You go to bed at a quarter to 10 and wake up at 8:01?
- This month is November 2025. Covid began in January 2020?
- You were born in 2012, your mother was born in 1986, and your nana was born in 1961 and great grandmother was born in 1933?
- This is 2025. The first Olympic games were believed to have begun 2800 years?
- The next Winter Olympics are in 2026. The first Winter Olympics were held in 1924. How many decades ago was that?
- My family all live in New Zealand, but my grandparents left Niue to live in New Zealand 5 and a quarter decades ago?
- Abel Tasman was the first of the European explorers to visit New Zealand. He arrived almost 3 and a half centuries ago. If we are in 2022, when did he first come to New Zealand?

Task 5 (independent)

Aotearoa has a sad history shown in the Land Wars which took place in the 18th Century.

Make a timeline beginning with the first events in the Land Wars in Wairau and include in your timeline the events in the Northern War, Wellington, and Whanganui.

What was the duration of time from the first event to the last event across the timeline?

What other lengths of time can you notice across your timeline. Record at least five of these.

<http://newzealandwars.co.nz/land-wars-timeline/full-timeline/>

Task 6

Use the Air New Zealand flight chart to plan a return trip to Tonga and back for you and your family. The distance to fly from New Zealand to Tonga is 2383 km. The flight to Tonga takes approximately 2 hours and 55 minutes. The back from Tonga takes approximately 3 hours and 15 minutes.

Choose a day to travel on and a day to return.

Make a timeline which shows in both analogue and on a 24-hour clock the flight to Tonga and the flight back to New Zealand. Include on the timeline the distance you have travelled:

The time you need to be at the Airport to check in.

The time you need to be in the departure lounge ready for boarding.

The time you would board before take-off.

The time the meal is served a quarter of the way through the flight.

The time you have to get ready for landing after you have completed 5/6 of the flight.

The landing time.

The time it takes to get through immigration and collect your luggage.

Write some statements you can make from your timeline.