

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 4

Copy Masters

Task 1

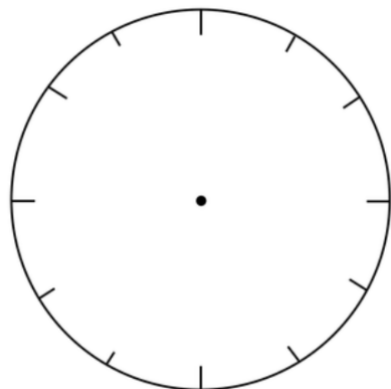
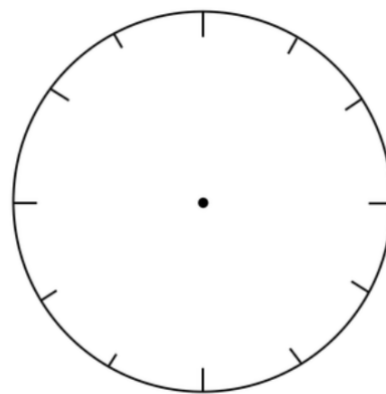
How many minutes are there between each hour on an analogue clock? To find out make a number line of an analogue clock which shows from 8 A.M. to 9 A.M. Make sure you put all the markings in between. Discuss with your group what the markings mean and then record the number they represent. What do you notice?

Use your timeline to show the activities you do between 8 and 9 o'clock on a school morning. Be ready to justify the length of time each activity took.

Task 1 (independent)

Where would the minute hand be if it was showing a quarter of an hour?

How many minutes past the hour is that?

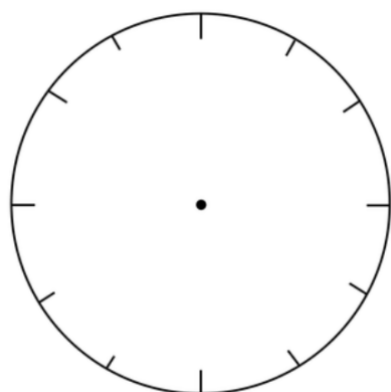
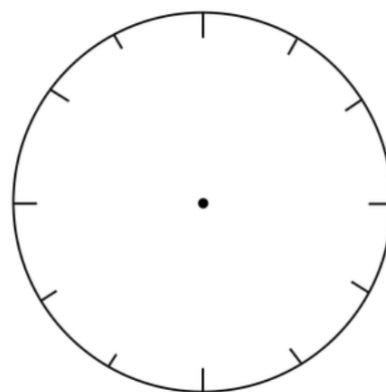


Where would the minute hand be if it was showing half of an hour?

How many minutes past the hour is that?

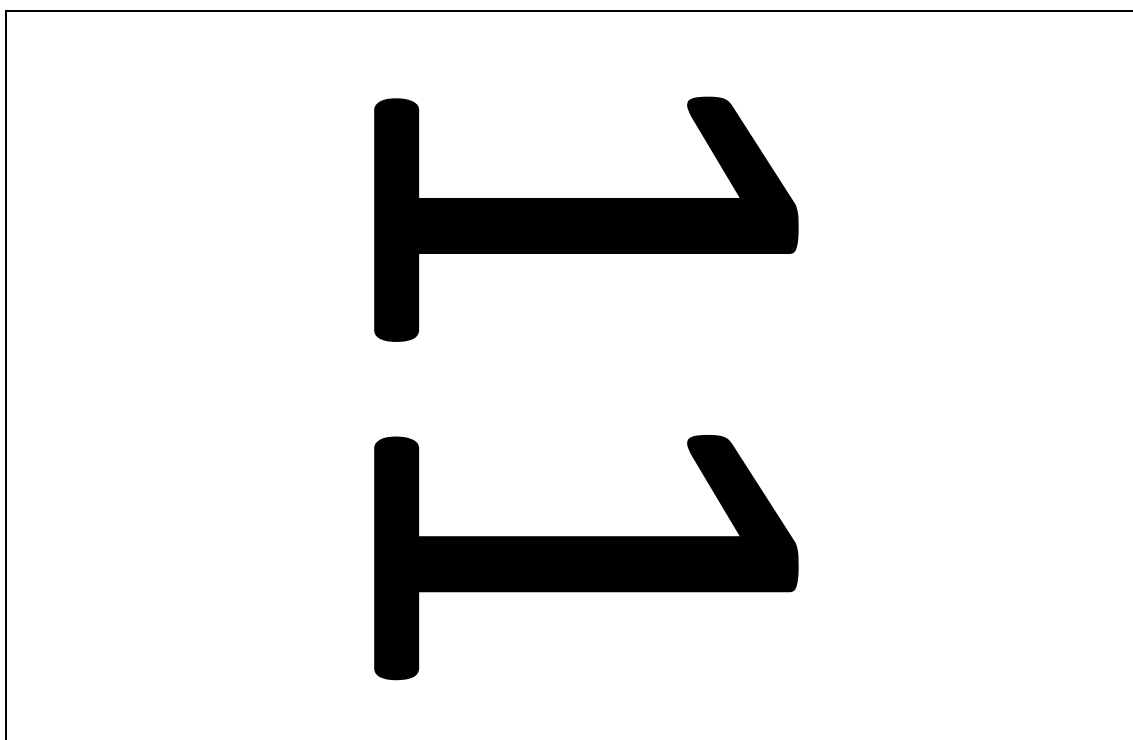
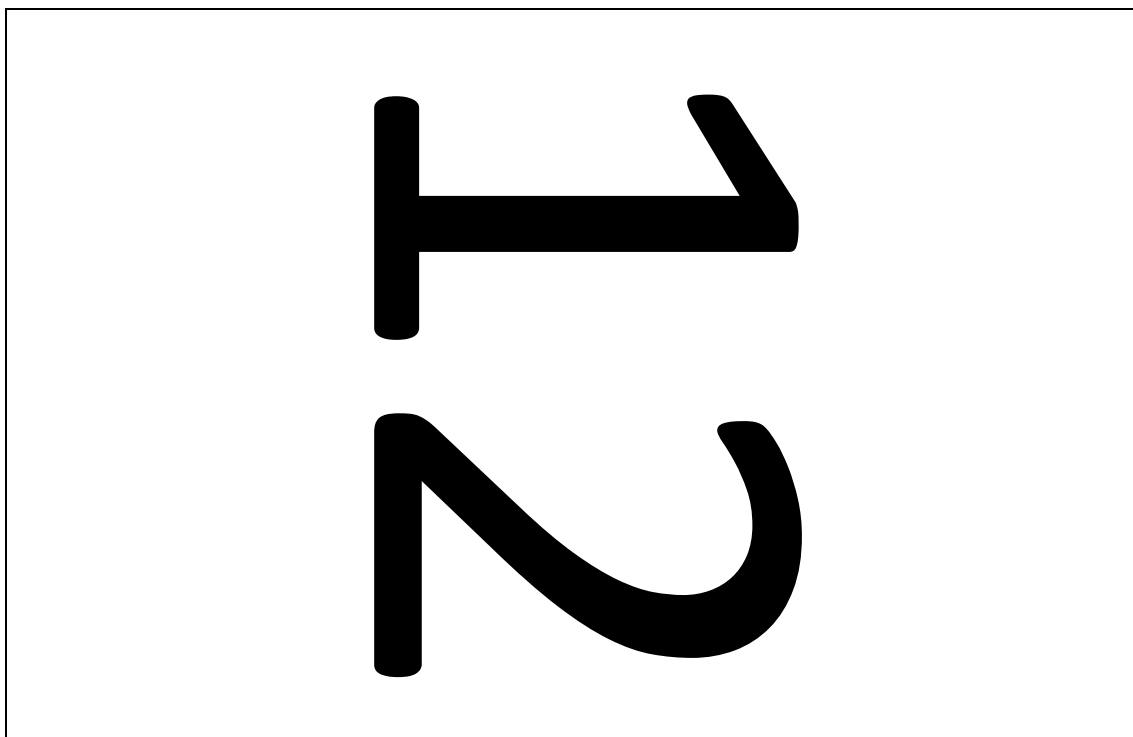
Where would the minute hand be if it was showing three quarters of an hour?

How many minutes past the hour is that?



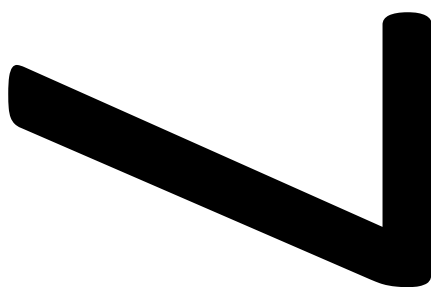
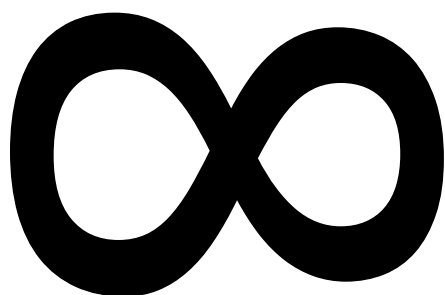
Where would the minute hand be if it was showing half past?
How many minutes past the hour is that?

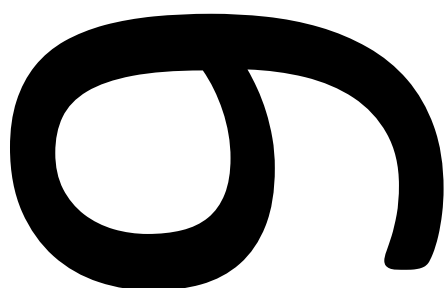
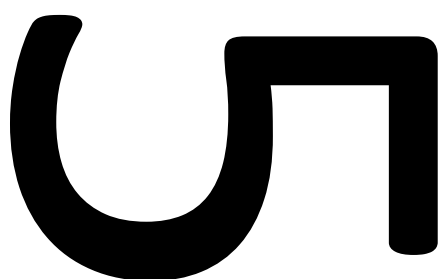
Can you describe a way of reading the minute hand on the analogue clock face?

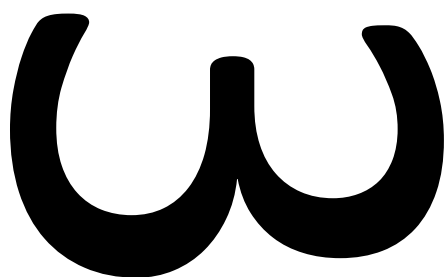
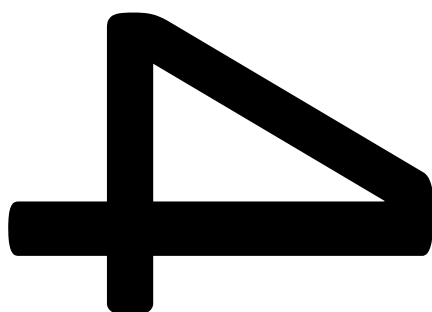
Task 1 (Resource)

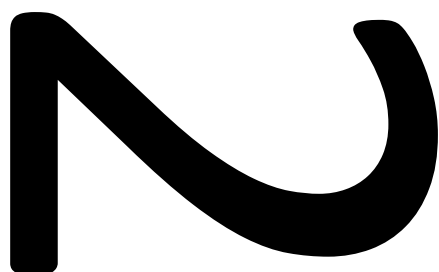
10

60



A large, bold, black cursive letter 'o' is centered within a rectangular box. A small black arrow is positioned at the top of the letter, pointing to the right to indicate the starting point and direction of the stroke.A large, bold, black cursive letter 'u' is centered within a rectangular box. A small black arrow is positioned at the top of the letter, pointing to the right to indicate the starting point and direction of the stroke.



A large, bold, black number 2 is centered within a white rectangular box. The number is written in a simple, sans-serif style.A large, bold, black number 4 is centered within a white rectangular box. The number is written in a simple, sans-serif style.

Task 2

What might you be doing at each hour from midnight to midday?



On a strip of paper, create a timeline that shows each hour between midnight and midday. Add activities to your timeline that show what you are doing between midnight and midday. When do you start and stop each activity?

When you have finished join the ends together so that you make a circular timeline.

What do you notice about your timeline and the analogue clock?

Now think about what you might be doing at each hour from midday to midnight. On a strip of paper, create a timeline that shows each hour between midday and midnight. Add activities to your timeline that show what you are doing between midnight and midday. When do you start and stop each activity?

When you have finished join the ends together so that you make a circular timeline.

What do you notice about your timeline and the analogue clock?

Task 2 (independent)

It is Saturday! What are some common things you do from the beginning of your day until midday? What about from midday until you go to bed?

Make a timeline of your day. Make sure that you mark the time and record what time the activity begins and then what time it ends.

How is this timeline different to a school day?

Task 3

To celebrate my papa's birthday our family are coming over for an umukai that the men will lift at 5.30 P.M.

The women prepared the food for the umukai last night, and the men got up very early to put it down. My Dad says that it will take 13 hours to cook.

What time did they put it down?

Be prepared to explain and justify your explanation with a representation.

Task 3 (independent)

Think about what you can do in one second? What about 60 seconds? Is 60 seconds the same as 1 minute? What do you notice about how many seconds equal one minute and how many minutes equal one hour? How is this the same or different from how many hours equal one day and how many months equal one year?

Record your ideas.

Task 4

This afternoon we are having a party. My friends will arrive at 3 o'clock. It is 9 o'clock in the morning now so how long do I have to wait for them to come?

This afternoon we are having a party. My friends will arrive at 4.30 P.M. It is 7.15 A.M now so how long do I have to wait for them to come?

Five hours ago, we went to a party. It is 3 P.M now. What time did we go to the party?

Seven and a half hours ago, we went to a party. It is 5.15 P.M now. What time did we go to the party?

Task 4 (independent)

To celebrate my papa's birthday our family are coming over for an umukai that the men will lift at 6.00 P.M.

The women prepared the food for the umukai last night, and the men got up very early to put it down. My Dad says that it will take 13 hours to cook.

What time did they put it down?

Explain and justify your explanation with a representation.

Task 5

Our Pāsifika festival was 25 days ago. Today is Thursday. What day was the Pāsifika festival?

Our Pāsifika festival every year is in November. Our last Pāsifika festival was 11 months ago. What is this month?

The first Pāsifika festival was held in our school in 1987. We missed holding it for three years because of Covid. How many years has our school celebrated our Pāsifika festival?

Task 5 (independent)

Grandma is having a party. Her friends will arrive at 2 o'clock. It is 10 o'clock in the morning now so how long does she have to wait for them to come?

This afternoon we are having a party. My friends will arrive at 3.30 P.M. It is 6.15 A.M now so how long do I have to wait for them to come?

Six hours ago, we went to a party. It is 4 P.M now. What time did we go to the party?

Nine and a half hours ago, we went to a party. It is 08.15 P.M now. What time did we go to the party?

Task 6

Tevita and Mepa are going to the Airport to meet their family arriving from Tonga on Friday. The plane lands at 10.30 A.M. They want to be at the airport anytime after 10 A.M but before the plane lands.

They need to catch the Airport Link bus from Manukau Station and it takes 40 minutes to get to the International Airport.

What possible times might they catch the bus to be there in plenty of time?

If their family had landed at 10.30 P.M. and they wanted to be there anytime after 10.00 P.M. before the plane lands. What possible times might they be there in plenty of time?

Task 6 (resource)



Task 6 (independent)

My birthday was 25 days ago. Today is Thursday. What day was my birthday party?

Our Pāsifika festival every year is in November. Our last Pāsifika festival was 14 months ago. What is this month?

The first Pāsifika festival was held in our school in 1990. We missed holding it for three years because of Covid. How many years has our school celebrated our Pāsifika festival?

Year 4 Copy Masters: Measurement - Time

Task 7

Here is a bus timetable which goes from Auckland City to Panmure.

to Otahuhu via Mission Bay, Glen Innes, Panmure and Carbine Rd					
Route	Commerce St (Stop 1323)	Mission Bay (Stop 7328)	Glen Innes (Stop 7821)	Panmure Interchange (Stop 1761)	Otahuhu
Monday to Friday				359	532 757
AM	532	-	(Panmure stop 1410 - 6.35)	6.37	7.05
	757	6.25	6.36	6.52	7.30
	757	6.55	7.06	7.22	8.05
	757	7.20	7.31	7.47	8.30
	757	7.50	8.01	8.23	9.05
	757	8.15	8.26	8.46	9.25
	757	8.45	8.56	9.14	9.55
	757	9.15	9.26	9.44	10.25
	757	9.45	9.56	10.14	10.55
	757	10.15	10.26	10.44	11.23
	757	10.45	10.56	11.14	11.53
	757	11.15	11.27	11.45	12.23
PM	757	11.45	11.57	12.15	12.55
	757	12.15	12.27	12.45	1.25
	757	12.45	12.57	1.15	1.55
	757	1.15	1.27	1.45	2.25
	757	1.45	1.57	2.15	2.55
	757	2.15	2.27	2.45	3.25
	757	2.45	2.57	3.17	4.00
	359	-	(Panmure stop 1410 - 3.40)	3.42	4.05
	757	3.15	3.27	3.47	4.35
	359	-	(Panmure stop 1410 - 4.10)	4.12	4.35
	359	-	(Panmure stop 1410 - 4.40)	4.42	5.05
	359	-	(Panmure stop 1410 - 5.10)	5.12	5.35

Use the timetable to plan some day trips for the school holidays.

Here are some things you might choose to do.

Swim at the beach in Mission Bay. Have fish and chips on the beach at Mission Bay. Play in the fountain at Mission Bay.

Go to the movies in Glen Innes. Visit your grand parents and cousins in Glen Innes. Go to the mall in Glen Innes. Have lunch at a café in Glen Innes.

Use the timetable to plan when you need to catch the bus and what time you will arrive. How long you think you will be doing an activity or activities and the time you will catch the next bus. Your last bus ride needs to end in Panmure.

When you have planned your day trip including the bus sections record how long the whole trip will take.

Task 7 (independent)

Martha and Magda are going to the Airport to meet their family arriving from Rarotonga. The plane lands at 09.30 A.M. They want to be at the airport any time after 10 A.M but before the plane lands.

If they catch the Airport Link bus from Manukau Station and it takes 40 minutes to get to the Airport.

What possible times might they catch the bus to be there in plenty of time?

If their family had landed at 7.30 P.M. and they wanted to be there anytime after 10.00 P.M. before the plane lands. What possible times might they be there in plenty of time?

Task 8

Ayla wants to make a special surprise for her Mum, so she decides to cook her breakfast. Her Mum likes poached eggs and baked beans on toast, so she asks her Dad to help her. Her Dad thinks it is a great idea but he has to go to work, so he gives her some cards with the instructions which she is to follow.

All Ayla has to do is make sure that they are in the right order then follow the instructions.

Put your cards in order and then work out what time Ayla needs to start cooking and what time the breakfast will be ready.

- What time does she need to put the water on for the eggs?
- What time does she put the toast on?
- What time does she put the beans on?

Task 8 (resource)

Lift the eggs carefully out of the water and gently put them alongside the toast.	Fill a small pot with water to a depth of about 10 cm.	Put two pieces of toast in the toaster.
Bring the water to the boil.	Put two slices of toast on a plate and butter them.	Carefully add the eggs to the simmering water and leave them for about 3 minutes.
As the water starts to boil add a dessert spoon of vinegar. Turn the heat down so the water is just simmering.	Open the baked beans and put them in the small pot.	Bring the beans to the boil and then turn them down low until everything else is ready.

Task 8 (independent)

Mele's family have a fruit stall at the Saturday markets. The markets open at 7.00am. The family need to be setting up their stall at least 2 hours before the markets open. What time should they arrive at the markets.

If they sell out of fruit by 12:45; how long would they have been at the market since arriving? If they keep selling until the markets close at 2:30pm; how long would they be at the markets?

Task 9

So, if there were five little monkeys on the bed. If the first little monkey fell off the bed at five to six and the others fell off the bed at ten-minute intervals, what time did the last little monkey fall?

So, if there were ten little monkeys on the bed. If the first little monkey fell off the bed at 8.45 and the others fell off the bed at ten-minute intervals, what time did the last little monkey fall?

Task 9 (independent)

Mum's birthday is in May. Dad's birthday is 7 months later. What month is Dad's birthday?

Aunty is going to visit her sister in the Islands for 7 months. She leaves home in March. What month does she return?

Sila says he can walk home in ten minutes. Tevita says he can walk home in 25 minutes because he leaves further away. If they both leave school at 3:15pm, what time would they get home?

Task 10

Is Geny, right?

She says that if the time has a 6 in it, it must be 6 o'clock in the afternoon.

Jamie agrees with her, and she says she has a way of proving it. What might she say?

Georgia disagrees with her, and she says she can give lots of times it might also be. What times might she use to justify her disagreement?

Task 10 (resource)