

College ABCD

Assignment

Assessment Period:	2022 S2
Course:	ESSENTIAL MATHEMATICS
Unit:	Unit 2: Essential Mathematics (1.0)
Accreditation:	A
Weight:	25%
Maximum Mark:	79
Due Date:	01 Aug

Assessment Conditions

The task is to be completed in class and at home. It should be completed and submitted electronically no later than 3:30 PM on the due date, through the school LMS with the declaration of own work form attached.

Additional Information

Assessment Criteria

Students will be assessed on the degree to which they demonstrate

- *Concepts and Techniques* - knowledge of mathematical facts, techniques and formulae presented in the unit. Appropriate selection and application of mathematical skills in mathematical modelling and problem solving.
- *Reasoning and Communication* - ability to use reasoning to support solutions and conclusions. Interpretation and communication of mathematical ideas in a form appropriate for a given use or audience.

Student Feedback

Verbal and/or written feedback will be given within two weeks of submission

Instructions

- Write your name and your teacher's name on each page submitted.
- Answer all questions, labelling each clearly.
- Show all working, as part marks may be awarded, where sufficient demonstration of your understanding is evident.
- Leave answers in exact form unless otherwise stated.
- Write in blue or black pen only. Sketch all graphs using a pencil and a ruler, showing appropriate features.
- If your work is word processed, ensure correct mathematical notation is used e.g. MS equation editor

Other Applicable Policies

BSSS and School policies on academic integrity and on penalties for late submission, as noted on the unit outline, apply.

For penalties for late and non-submission of work

Review [BSSS Policy and Procedure Manual 4.3.10](#) for more details.

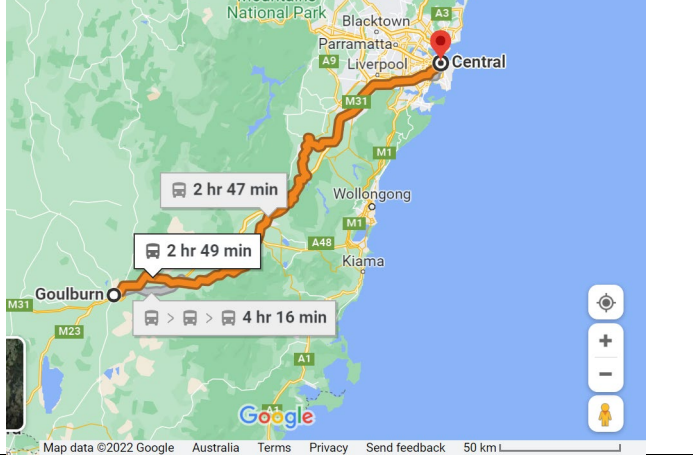
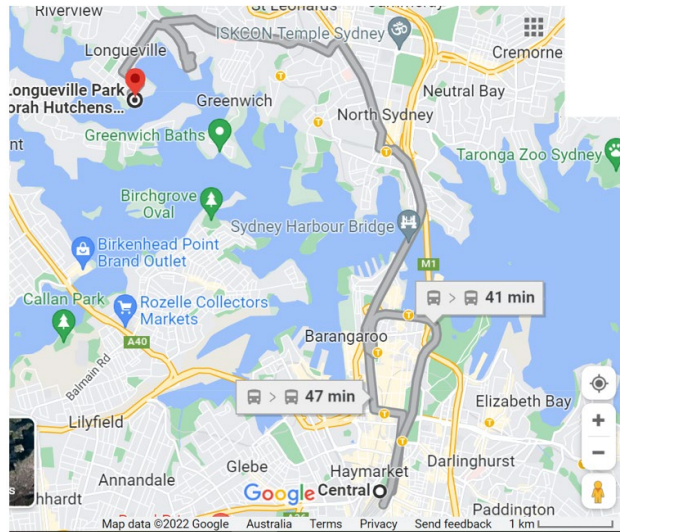
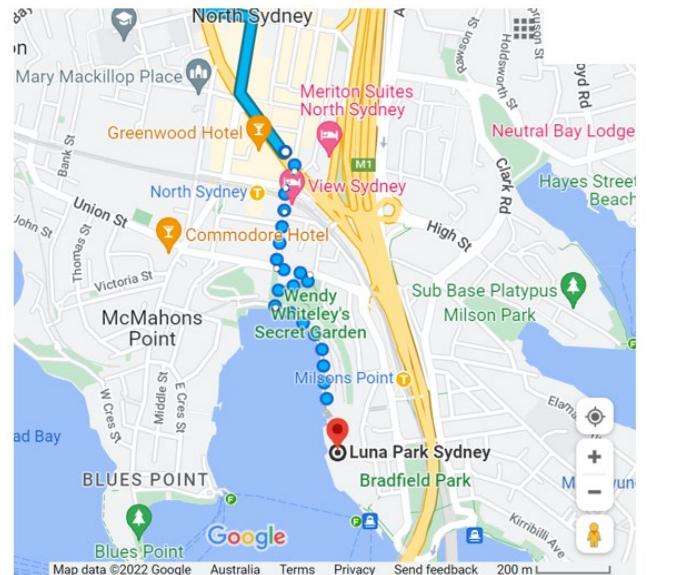
For academic integrity

Review [BSSS Policy and Procedure Manual 4.3.12](#) for more details.

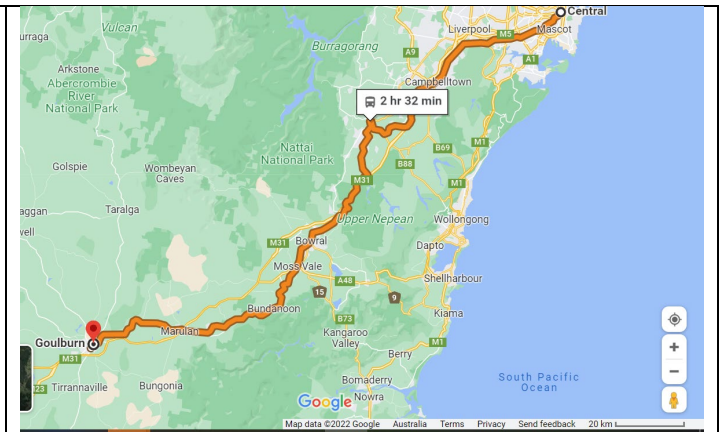
Goulburn to Longueville Park, to Luna Park to Sydney Harbour Bridge to The Rocks Markets

Student has chosen a clear and concise communication method to display the Itinerary and Maps together in a table.

Public Transportation Option

Itinerary, Cost, Times	Maps
<p>Goulburn Station Platform 1 to Central Station, Platform 4 Southern XPLOER Train 632 leaves Goulburn Station 8:22 and arrives in Sydney Central Station at 11:01 taking 2hours 39 minutes (6 stops)</p> <p>Economy Ticket Costs \$29.05 each way</p>	
<p>Central to Longueville Park</p> <p>11:08 Platform 16 train from Central to North Sydney train station arriving at 11:20 Walk 100m (2 minutes) to North Sydney Station Blue Street, Stand A to get bus 261 towards Lane Cove remain on bus until Poole St at Stuart Street (depart bus at 11:44am) Walk 110 metres (1 minute) to arrive at Longueville Park at 11:45am (Deborah Hutchens Playground), Stuart St, Longueville. Spend 45 minutes looking at the park and having picnic lunch.</p>	
<p>Depart Longueville Park at 12:30 pm walk to Stuart St opposite Poole St and wait for the 261 (arriving at 12:36) bus to City King St Wharf but get off at Pacific Highway at Walker Street after 21 stops at 12:55pm and walk 1.0km (12 minutes) to Luna Park Sydney Walking directions: Head southeast on Pacific Highway toward Walker Street, turn right onto Blue Street, turn left toward Walker Street take the stairs, continue onto Walker Street, turn left onto Lavender Street, turn right toward Peter Kingston Walkway, turn left onto Peter Kingston Walkway then you will be at Luna Park Sydney arrive at Luna Park at 1:07pm But \$80 ticket to get into Luna Park. Budget about \$50 to spend at Luna Park on food and games. Plan on spending about 2 hours at Luna Park.</p>	

Board Central 635 train departing at 5:36 to Goulburn travelling for 2 hours 31 minutes and arriving at Goulburn at 8:07pm.



CT1 Q-B level

Applies mathematical concepts in a variety of contexts to routine and non-routine problems.

Student neglected to calculate waiting times thoroughly across task resulting in the B grade instead of A grade for this outcome.

Student also failed to submit screenshot of correct timetables impacting on rubric results.

CT3 Q-B level

Uses digital technologies appropriately to solve routine and non-routine problems in a variety of contexts.

Student missed some maps that would be useful to the participant in this excursion.

For the portions submitted, student effectively used Google Maps to find appropriate maps with appropriate scale and screenshots these as required.

Private Transportation Option

Itinerary, Cost, Times

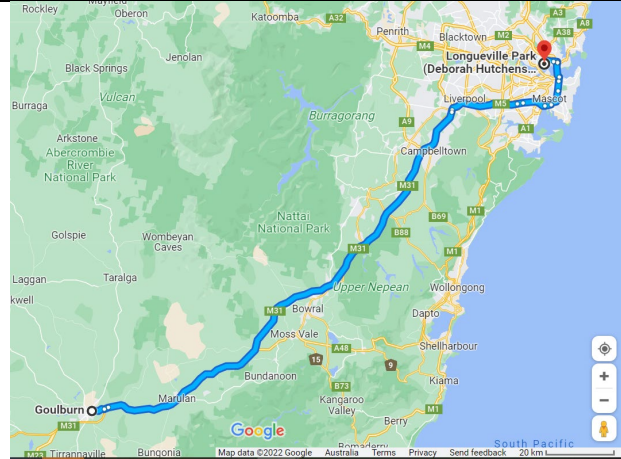
Depart Goulburn 7:00am driving to Longueville Park (199.5 km) about 2 hours 20 minutes. Stop at Sally's Corner McDonald's rest stop place to get to the loo and get a drink etc. (20 minutes). Arrive Longueville Park 9:40am (allocate about 10 minutes to find parking).

Toll breakdown by motorway
An accessible data table of the toll summary is also available

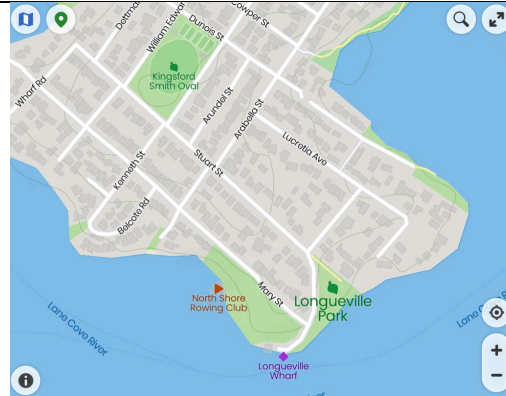
Motorway	Class A	Class B
M7 Transurban Link	\$9.05	\$27.15
M2 - North Ryde Transurban Link	\$8.90	\$26.69
Total	\$17.95	\$53.84

Parking at Longueville Park will need to be side street as there does not appear to be any public parking nearby.

Maps

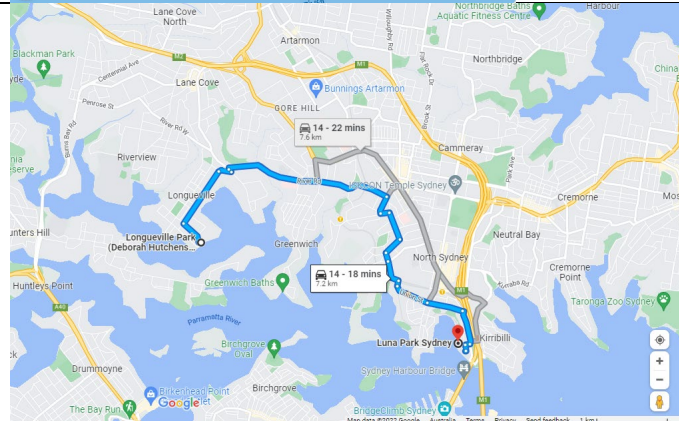


Spend 1 hour looking at the park and having picnic lunch. Depart Longueville Park at 10:50am Drive from Longueville

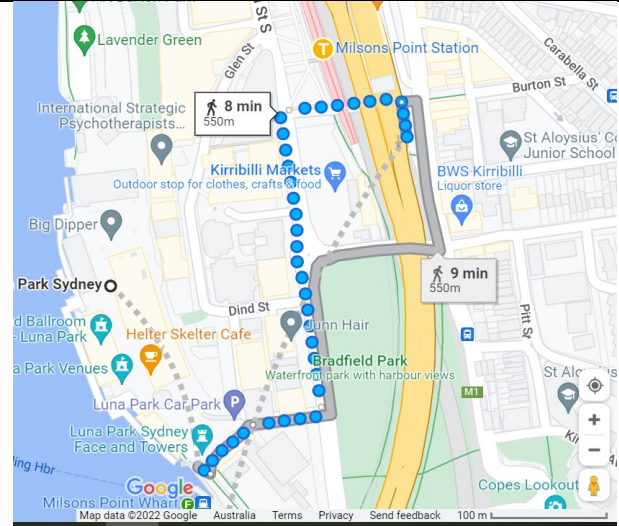


Park to Luna Park the drive should take about 20 minutes. Arrive at Luna Park car park at 11:10am. Luna Park has parking. I would plan to leave the car at Luna Park carpark for the rest of the day until departing Sydney. Cost for 5+ hours of parking is \$49.

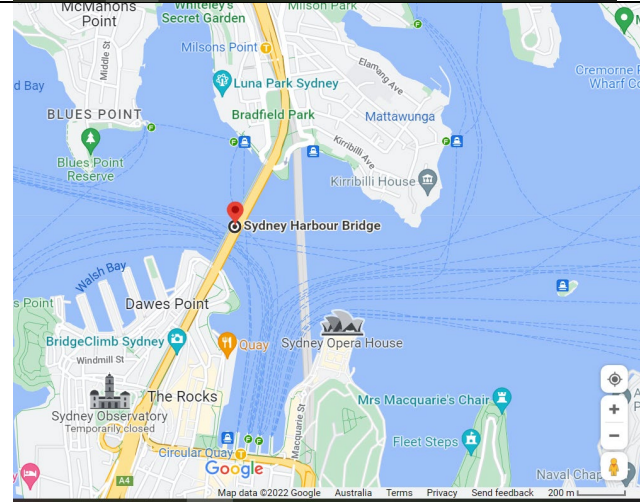
Buy \$80 ticket to get into Luna Park. Budget about \$50 to spend at Luna Park on food and games. Plan on spending about 3 hours at Luna Park.



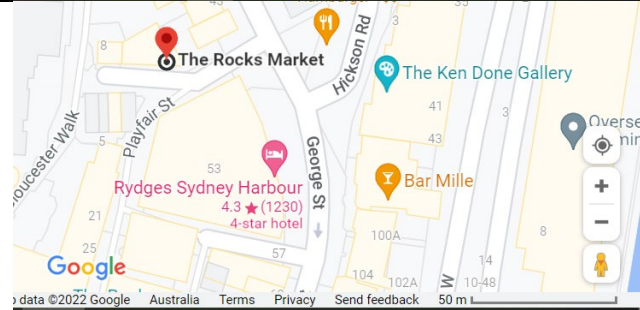
Depart Luna Park around 2:10pm. Walk south-east turn left toward Paul Street continue onto Paul Street, turn left onto Alfred Street, turn right onto Burton Street and then turn right to take the stairs to the Sydney Harbour bridge (8 minutes, 550 metres)



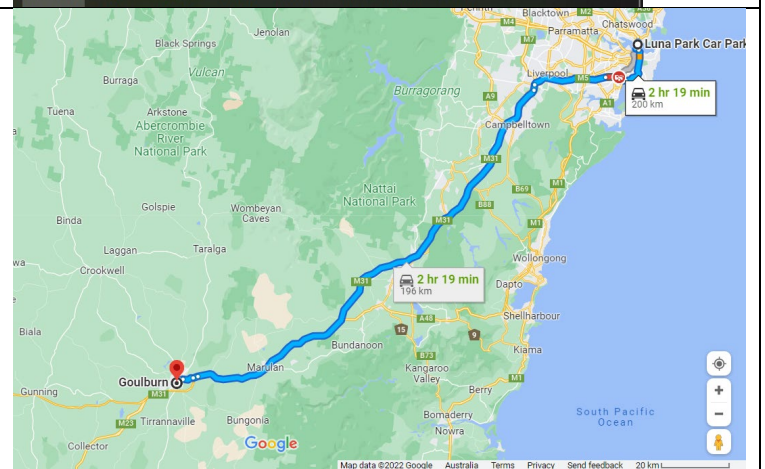
Walk across Sydney Harbour Bridge (free) about 1.5 km and 30 minutes (arrive at other side of Bridge at 2:48pm)
The end of the Bridge will let you off at The Rocks Market.



The end of the Bridge will let you off at The Rocks Market.



Walk through the Rocks Markets (1 hour) –do some shopping, get some snacks for the ride back to Goulburn Depart Rocks Markets at 3:48 pm and then head back across the Sydney Harbour Bridge walking (40 minutes) to get back to the Luna Park Carpark at about 4:28pm. Depart Luna Park Carpark 4:35 pm and drive to Sally’s Corner McDonald’s rest stop for a 20 minute driver break. Then continue to Goulburn, arrive in Goulburn at 7:15pm.



Student did not include any road toll costs for the return trip and very few details of the driving instructions for the way back to Goulburn.

Place of Aboriginal Significance Details:



Longueville Park, Longueville: Engravings of a fish and an emu are to be found on the left hand side of the park near the waterfront at the end of Stuart Street. The engravings, which have been touched up and painted in recent times, are situated on a flat rock face above the water and have a timber barrier erected around them. The emu motif is thought to have been a totemic figure to the Dharug clan inhabiting this area. It occurs only in a small band along the foreshore on the northern side of the harbour and in the Lane Cove and Parramatta River Catchment areas, and then disappears until re-emerging in Ku-Ring-Gai National Park.

Student provided only scant details of the place of indigenous significance in Sydney that they chose to visit.

Comparison

Public Transport Option	Private Vehicle Option
Cost: Train ticket \$29.05 each way Bus ticket about \$10 Luna Park ticket \$80 Spending money at Luna Park \$50 Spending money at The Rocks Markets \$50 Total \$248.10 per person	Cost: 400km driving, car gets about 15km/L Will need about 30L of petrol $30 \times 2.19 = \$65.70$ Tolls \$17.95 each way Parking 49 Luna Park ticket \$80 Spending money at Luna Park \$50 Spending money at The Rocks Markets \$50 Total \$330.60 per person
The Private Vehicle Option costs \$82.50 each	
Time: Leave Goulburn 8:22am Arrive back in Goulburn 8:07pm 11 hours 45 minutes	Time: Leave Goulburn 7:00am Arrive back in Goulburn 7:15pm 12 hours 15 minutes
The Private Vehicle option takes 30 minutes longer	
Distance Travelled: Same for both options	
Average Speed 200 km Time 2 hours 39 minutes $\text{Average Speed} = 200 \div 2 \frac{39}{60}$ $= 75.5\text{km/h}$	Average Speed: 200km 2 hours 20 minutes $\text{Speed} = 200 \div 2 \frac{20}{60}$ $= 85.71\text{km/h}$
Convenience: Having my own car is more convenient	<div style="border: 1px solid black; padding: 5px; display: inline-block;">Very minimal justification</div>
I would choose to take public transportation as it is cheaper and gets me there and home faster.	
Reflection: It took ages to find information on the trains and buses from Goulburn to Sydney and in Sydney. I started looking and found it hard. My dad helped me find the information. Then snipping all the maps was annoying but I got through that quicker. I should have started sooner and asked for help straight away. I wasted a lot of time not finding anything.	

RC2 Q-C level

RC3 Q-D level

Reflects on their own thinking with some reference to planning, time management, use of appropriate strategies to work independently and collaboratively

Student showed below standard reflection as it was too brief to go into enough detail to achieve any higher standard.

References:

https://transportnsw.info/regional-bookings/select-trip?from=GUL&to=SYD&dateTime=2022-10-22T00:00:00&returnDateTime=2022-10-22T00:00:00&P_0_PT=A

<https://www.visitsydneyaustralia.com.au/sites-lns.html>

https://www.google.com/search?q=how+to+get+to+Longueville+park+public+transport&rlz=1C1GCEA_enAU1016AU1016&oq=how+to+get+to+Longueville+park+public+transport&ags=chrome..69i57.13329j0j7&sourceid=chrome&ie=UTF-8

<https://www.lunaparksydney.com/tickets-passes>

<https://sydneyuncovered.com/sydney-harbour-bridge-walk/>

<https://www.therocks.com/whats-on/market-overview>

<https://www.autofun.ph/news/how-fuel-efficient-is-the-ford-territory-44097>

Student has provided a list of websites but has not detailed what information was found at these sites.