To be completed by candidate

**NSN** | | | | | | | | | |

**School Code** | | | | |

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Draw a cross through the box (☒) if you have NOT written in this booklet

NZQA | Mana Tohu Mātauranga o Aotearoa
New Zealand Qualifications Authority

# Numeracy 2026

## 32406 Apply mathematics and statistics in a range of everyday situations

Credits: Ten

## WEEK ONE | 7–11 SEPTEMBER 2026

| OUTCOMES | |
|---|---|
| 1 | Formulate mathematical and statistical approaches to solving problems in a range of everyday situations. |
| 2 | Use mathematics and statistics to meet the numeracy demands of a range of everyday situations. |
| 3 | Explain mathematical and statistical responses to situations. |

Enter your National Student Number (NSN) and School Code into the space above.

**You should attempt ALL the questions in this booklet.**

If you need more room for any answer, use the extra space provided at the back of this booklet.

Check that this booklet has pages 2–27 in the correct order and that none of these pages is blank.

Do not write in the margins (▨). This area will be cut off when the booklet is marked.

**YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.**

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## QUESTION ONE: Banana cake




You need to make a banana cake for a party.

Instead of sugar, you choose to use liquid sweetener.

1(a) The cake needs 28 tablespoons of sugar.

1 tablespoon of liquid sweetener replaces 4 tablespoons of sugar.

How many tablespoons of liquid sweetener do you need?

[ ] tablespoons

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You need some butter to make the banana cake.




A 500 gram block of butter costs $11.

You need 75 grams of butter to make the cake.

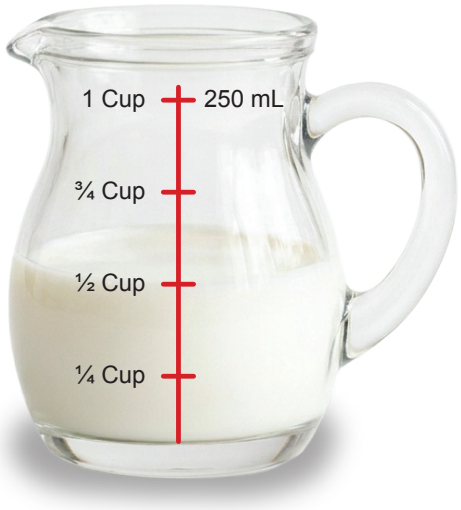
1(b) What is the cost of 75 grams of butter?

$ [ ]

The banana cake recipe needs 120 millilitres (mL) of milk.

1(c) Is there about 120 mL of milk in this jug?

Explain your answer.




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The diagram below shows the time it will take to complete the steps of the banana cake recipe.

**Banana cake recipe – timing**

| | |
|---|---|
| Prepare cake mix | 15 minutes |
| Bake cake | 45 minutes |
| Cool cake | 40 minutes |
| Ice cake | 10 minutes |

The cake needs to be ready for the party at **3 p.m.**

1(d) Select (✓) the **latest** time you can start making the cake.

(i) 1 p.m. ◯

(ii) 1:10 p.m. ◯

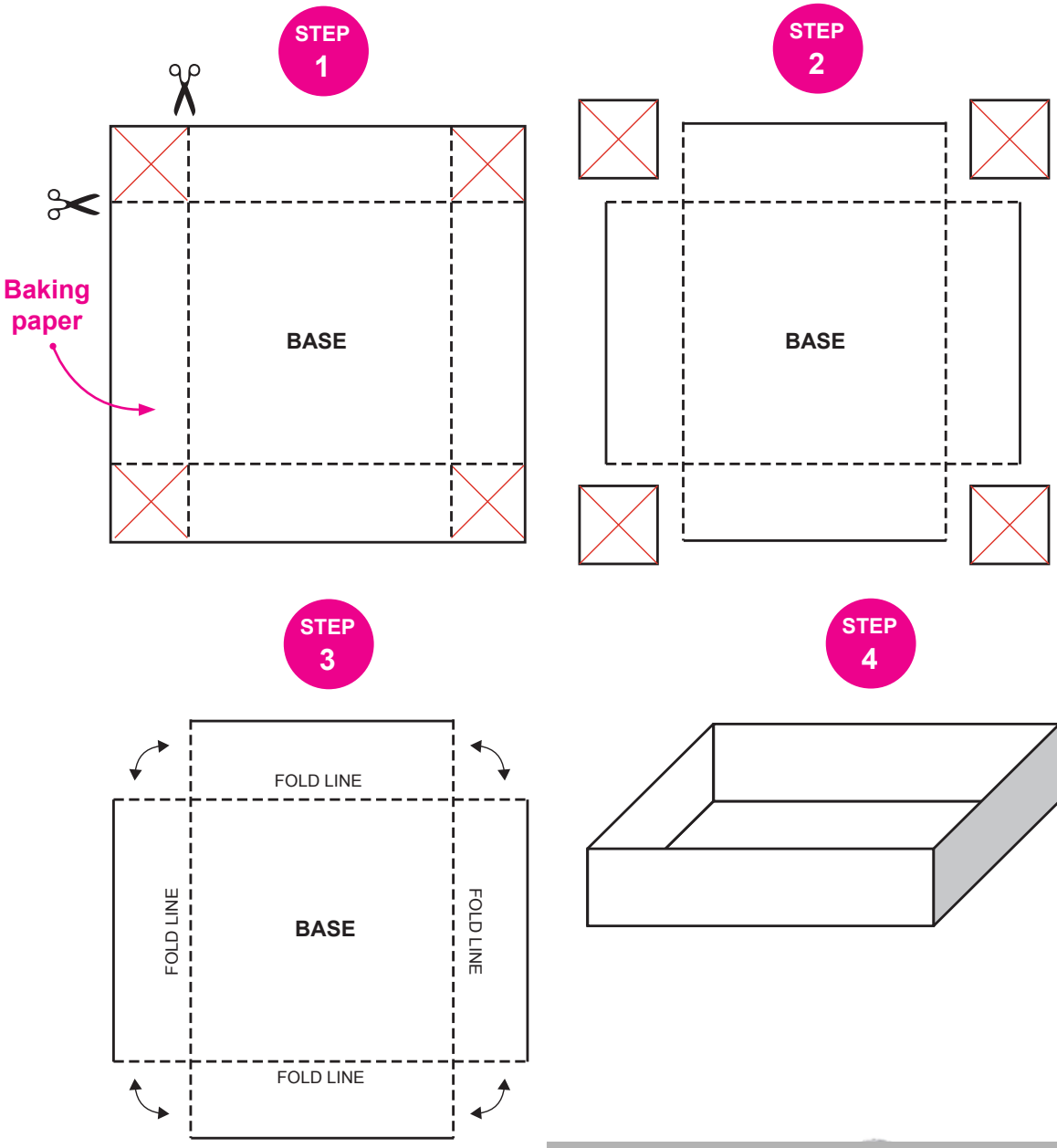
(iii) 1:32 p.m. ◯

(iv) 1:45 p.m. ◯

(v) 2 p.m. ◯

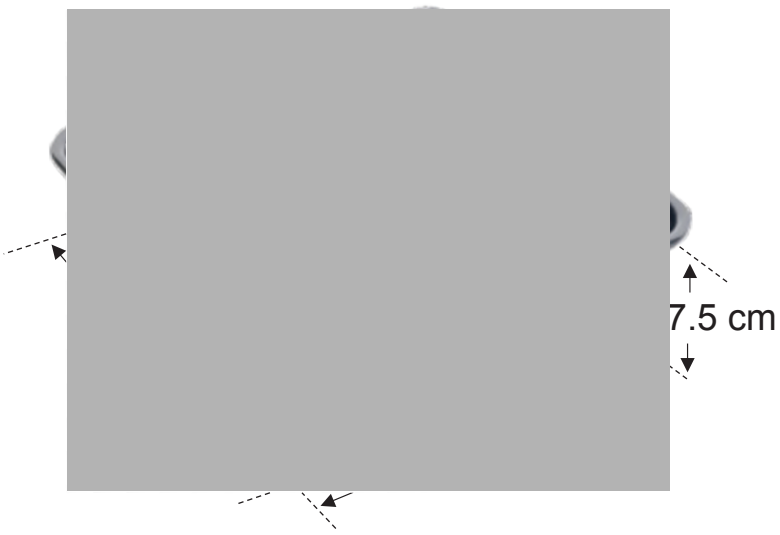
You line a square cake tin with baking paper.

The steps below show how to cut and fold the paper so that it fits neatly into the cake tin.




1(e) Step 1 starts with a square piece of baking paper.

How long is each side of the square?




[ ] cm

This monkey figure will be put on top of the cake.



Front view



Top view

1(f) Select (✓) the option that shows the correct side view of the monkey figure.



(i) ◯



(ii) ◯



(iii) ◯



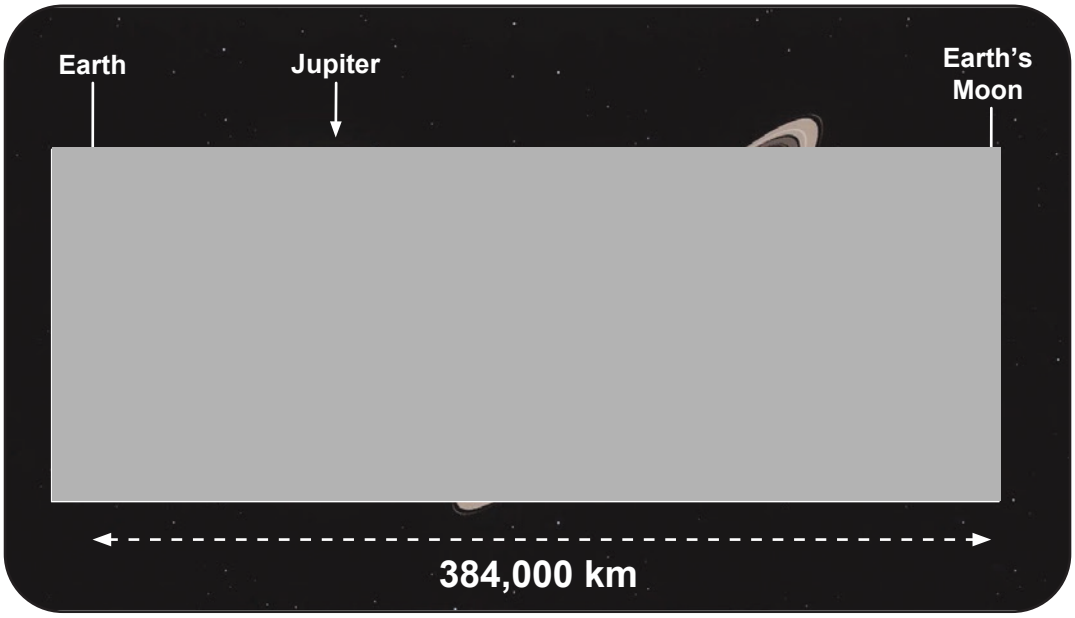
(iv) ◯



(v) ◯

**QUESTION TWO: The Cosmos**

All the planets could fit tightly into the distance between the Earth and its Moon.




The Earth's Moon is about 384,000 kilometres (km) away from Earth.

2(a) Select (✓) the option that shows the approximate width (diameter) of Jupiter.

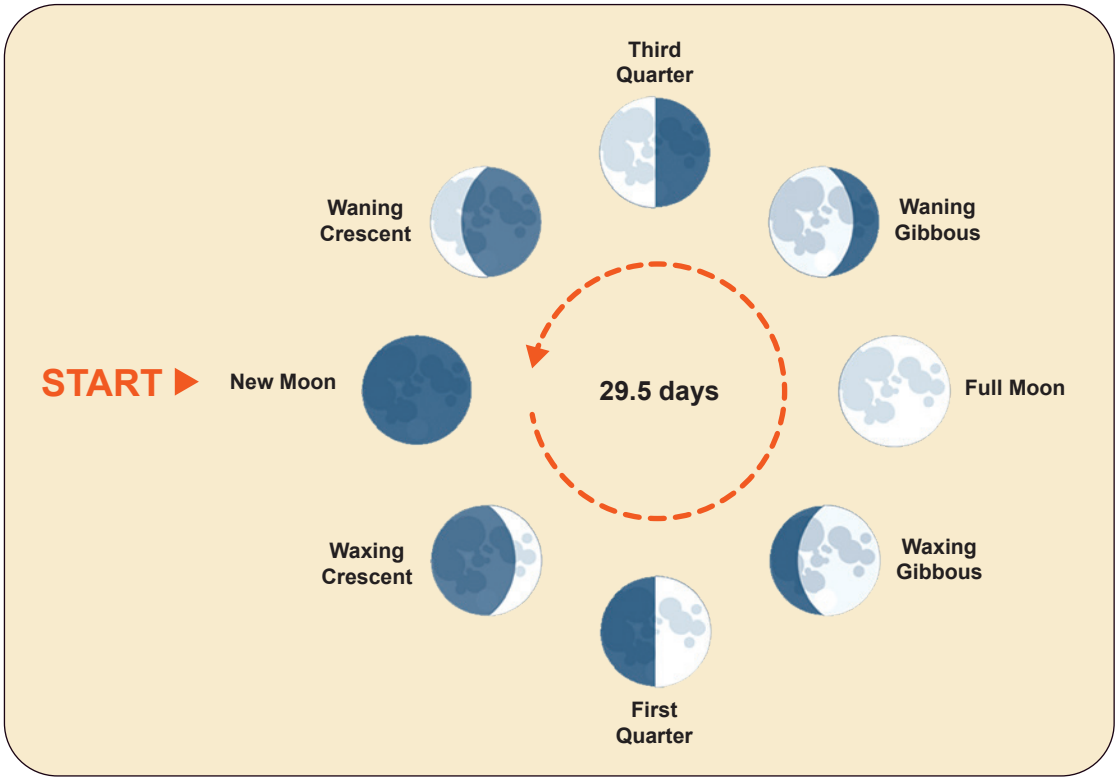
(i) 50,000 km ◯

(ii) 100,000 km ◯

(iii) 130,000 km ◯

(iv) 160,000 km ◯

(v) 200,000 km ◯




This diagram shows the eight phases of the Moon over a 29.5-day cycle.

The cycle begins with the New Moon.

2(b) Select (✓) the phase that the Moon will be in on day 22.

(i) Full Moon ◯

(ii) New Moon ◯

(iii) First Quarter ◯

(iv) Third Quarter ◯

(v) Waxing Gibbous ◯



Halley's Comet

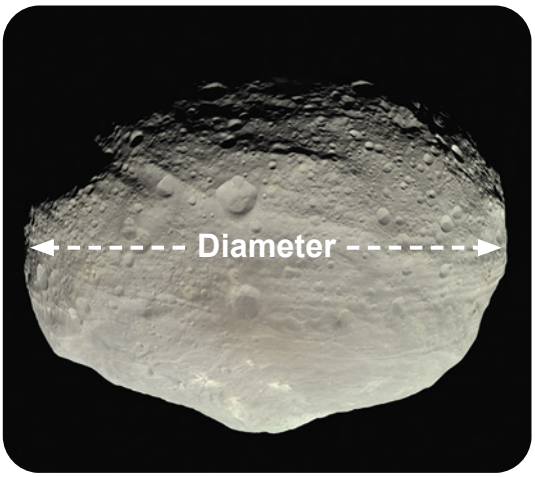
Halley's Comet appears in the sky every 75 to 76 years.

It was seen in 1835 and again in 1910.

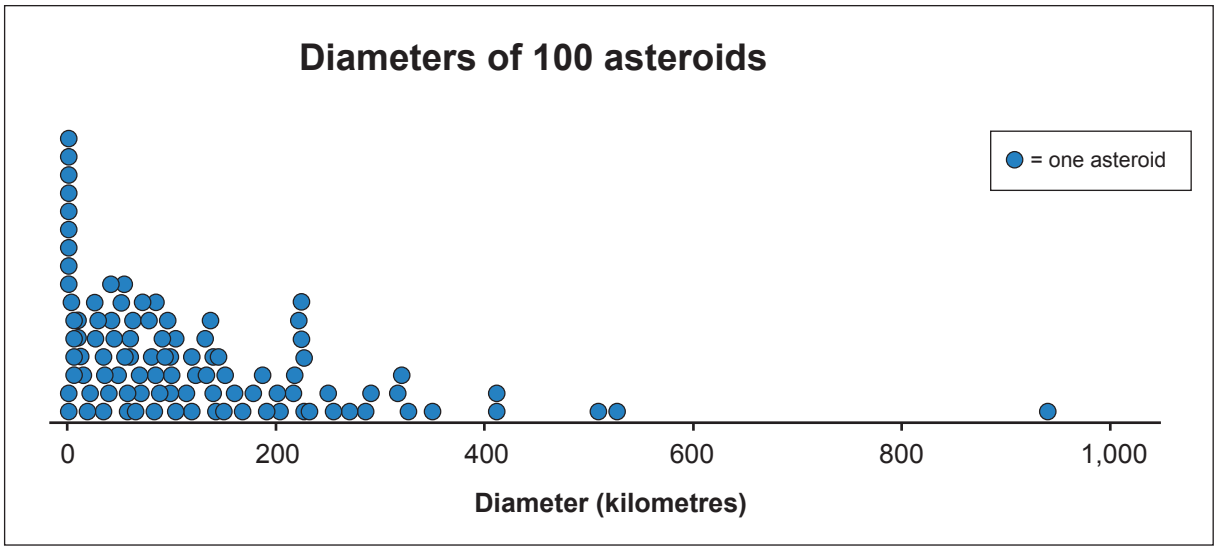
2(c) Using the 75 to 76 year pattern, when will Halley's Comet next appear **in this century**?

Show your working.

The diameter of an asteroid is the longest distance across it.




The graph below shows the diameters of 100 asteroids.




2(d) Referring to the graph, select (✓) the statement that is true:

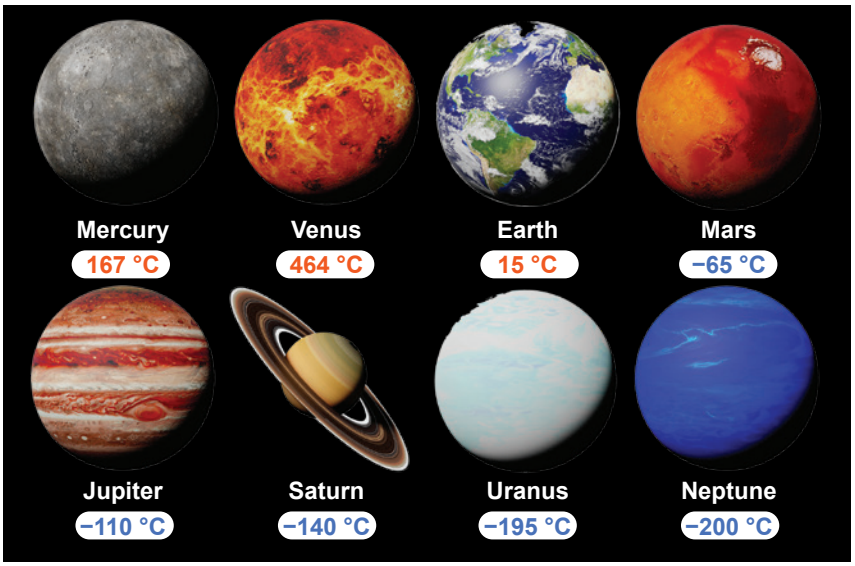
(i) The largest asteroid has a diameter of 810 km ◯

(ii) Most asteroids measure over 300 km across ◯

(iii) The average diameter of the asteroids is about 450 km ◯

(iv) Most asteroids measure less than 200 km across ◯

This image shows the average temperature of each planet in degrees Celsius (°C).



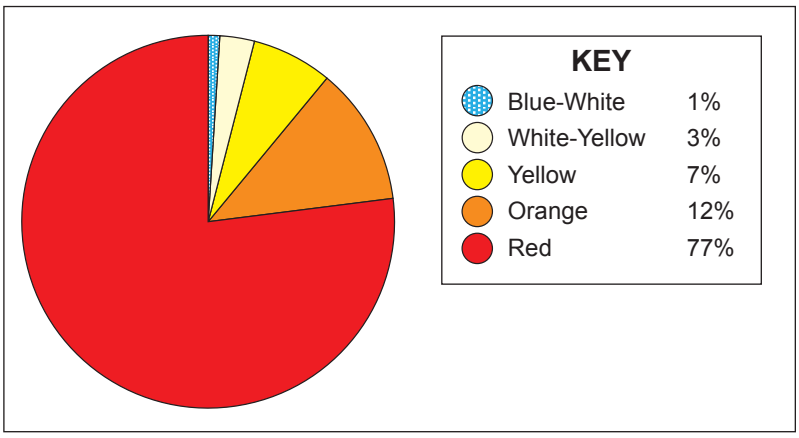

2(e) What is the **difference** in average temperature between the Earth and Mars?

[ ] °C

---

Stars are identified by their colours.

The pie chart below shows the percentage of each star colour in the universe.




2(f) If six stars are picked **at random**, is it likely that one of them will be blue-white?

Explain your answer using probability and percentages from the pie chart.

**QUESTION THREE: Fish and chips**




Above is Snapper Shack's takeaway menu.

3(a) How much cheaper is it to buy Combo 2 than it is to buy **the items** separately?

Show your working.

Snapper Shack buys fresh fish for $56.60 per kilogram.

They cut each piece to weigh 150 grams.

3(b) What is the price of one piece of fresh fish?

$ ☐

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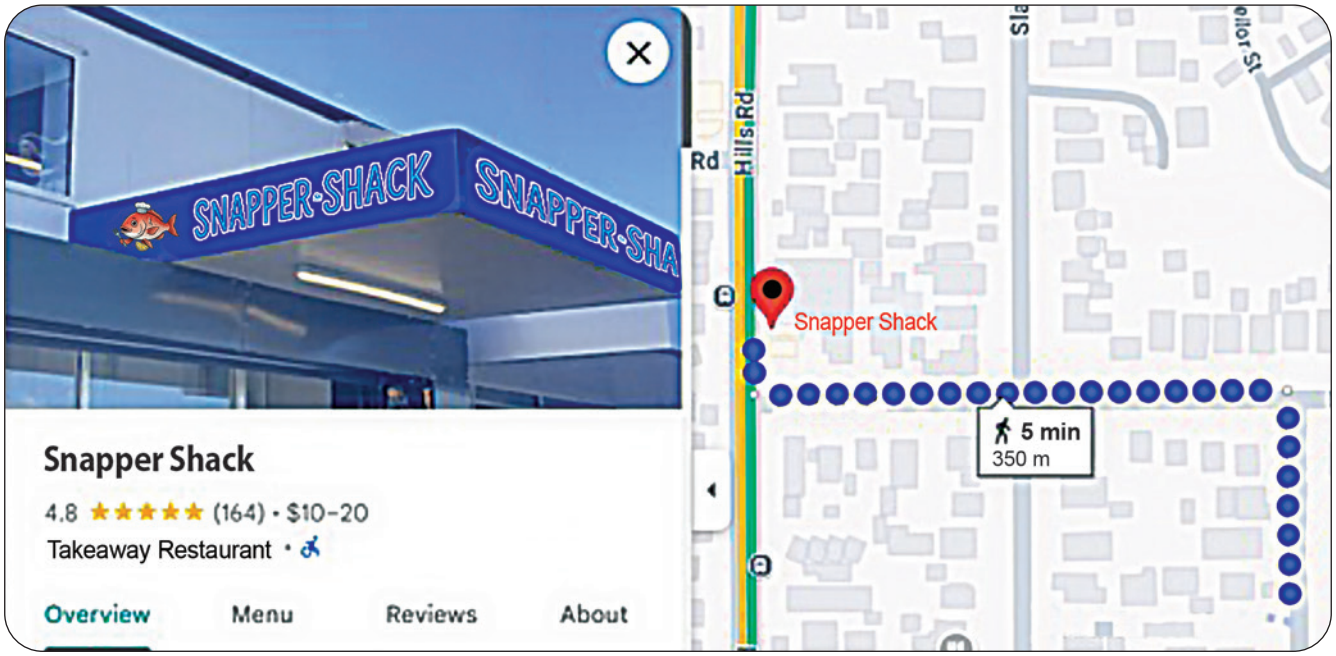
In 2026, the price of battered fish at Snapper Shack is 1.5 times what it was in 2016.



3(c) If the 2026 price is $5.40, what was the price in 2016?

$ ☐

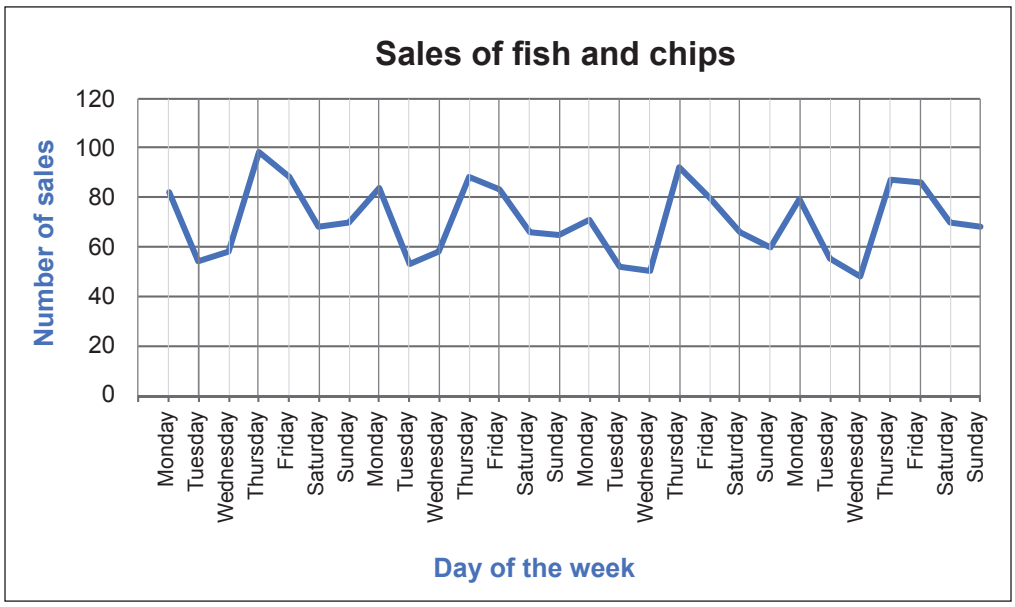
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Google Maps says it takes 5 minutes to walk 350 metres from home to Snapper Shack.

3(d) What is the average walking speed in **kilometres per hour** (km/h)?

☐ km/h




The owner of Snapper Shack is looking for part-time staff to work 3 days a week.

3(e) Which 3 days of the week should the owner have the part-time staff working?
Use information from the graph above to support your answer.

---

New Zealanders eat about 1.7 million meals of fish and chips every month.

Each meal costs about $10.50.

3(f) About how much money is spent in total on fish and chips every month?

(i) Less than $1 million ○

(ii) Between $1 million and $2 million ○

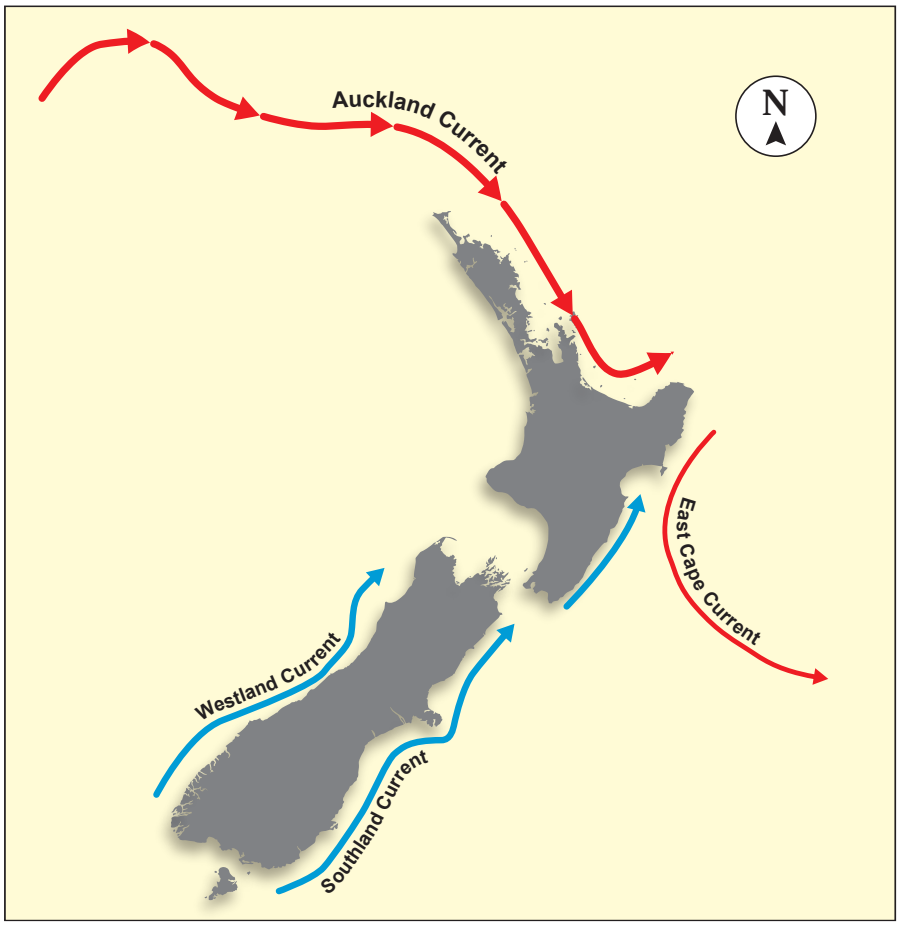
(iii) About $10 million ○

(iv) About $20 million ○

(v) More than $20 million ○

## QUESTION FOUR: Oceans

This map shows the main ocean currents around New Zealand. Blue currents are cold. Red currents are warm.




4(a) Select (✓) the general direction in which the Auckland Current (red) moves.

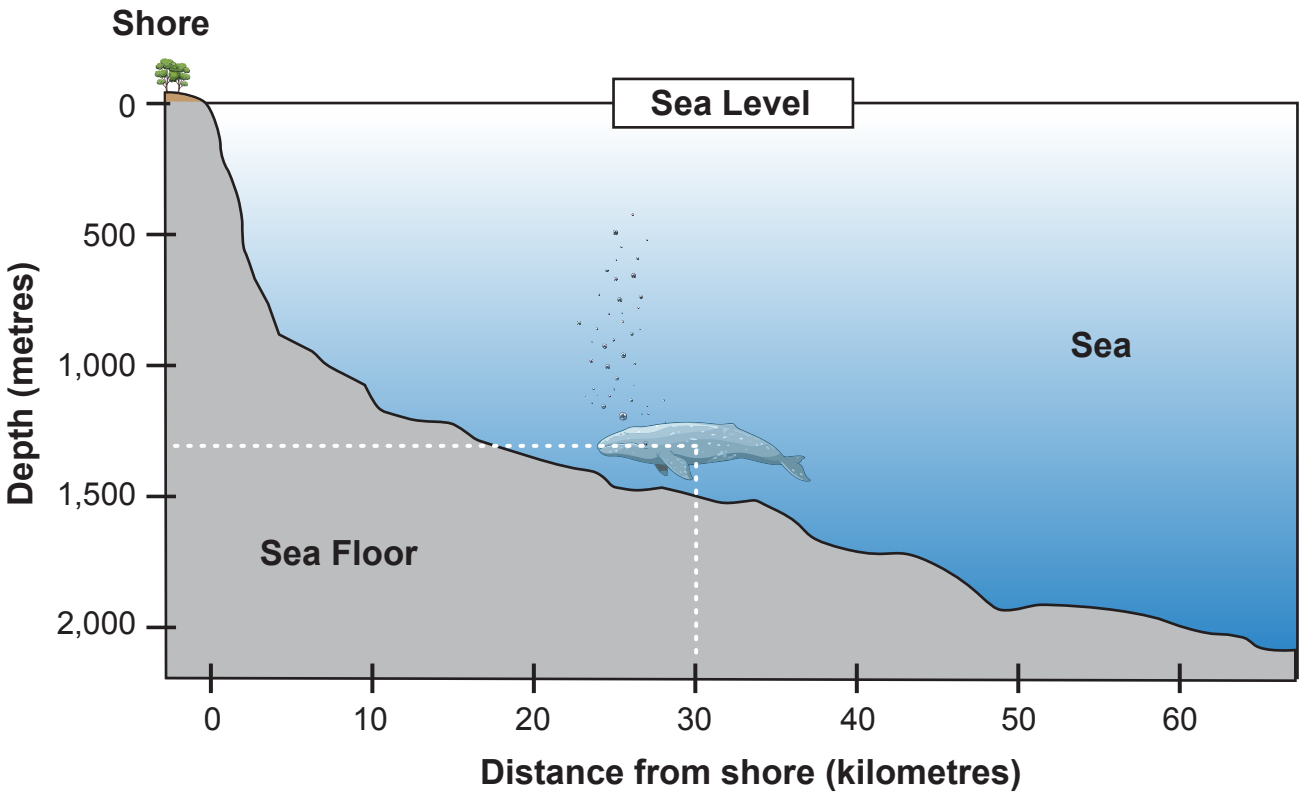
(i) North ◯

(ii) North-east ◯

(iii) East ◯

(iv) South-east ◯

(v) South-west ◯




The whale shown in the graph above is about 30 kilometres from shore.

4(b) About how many metres (m) below sea level is the whale?

(i) 1,100 m ◯

(ii) 1,200 m ◯

(iii) 1,300 m ◯

(iv) 1,400 m ◯

(v) 1,500 m ◯

The sound made by a sperm whale travels underwater at a speed of 1,500 metres per second.

4(c) How long would it take the sound to travel 15 kilometres?

(i) 10 hours ◯

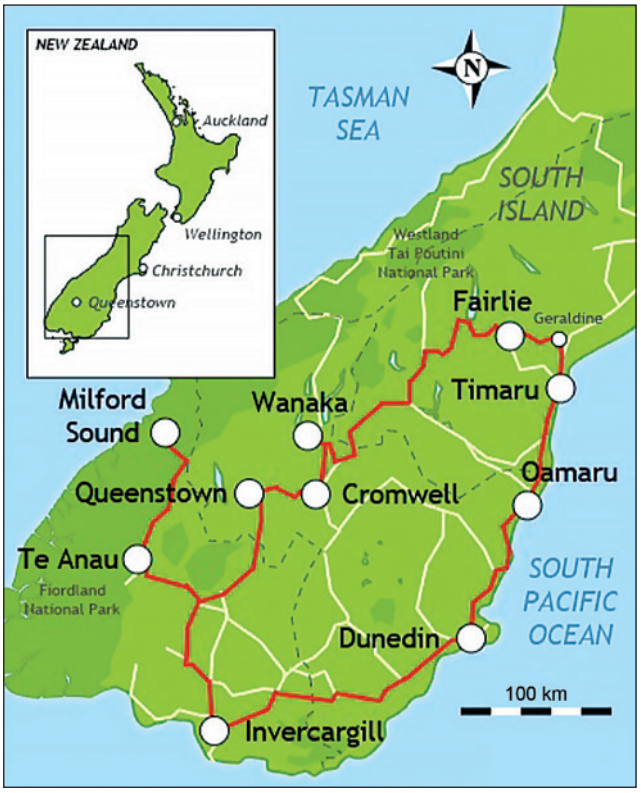
(ii) 10 minutes ◯

(iii) 100 seconds ◯

(iv) 10 seconds ◯

(v) 1 second ◯

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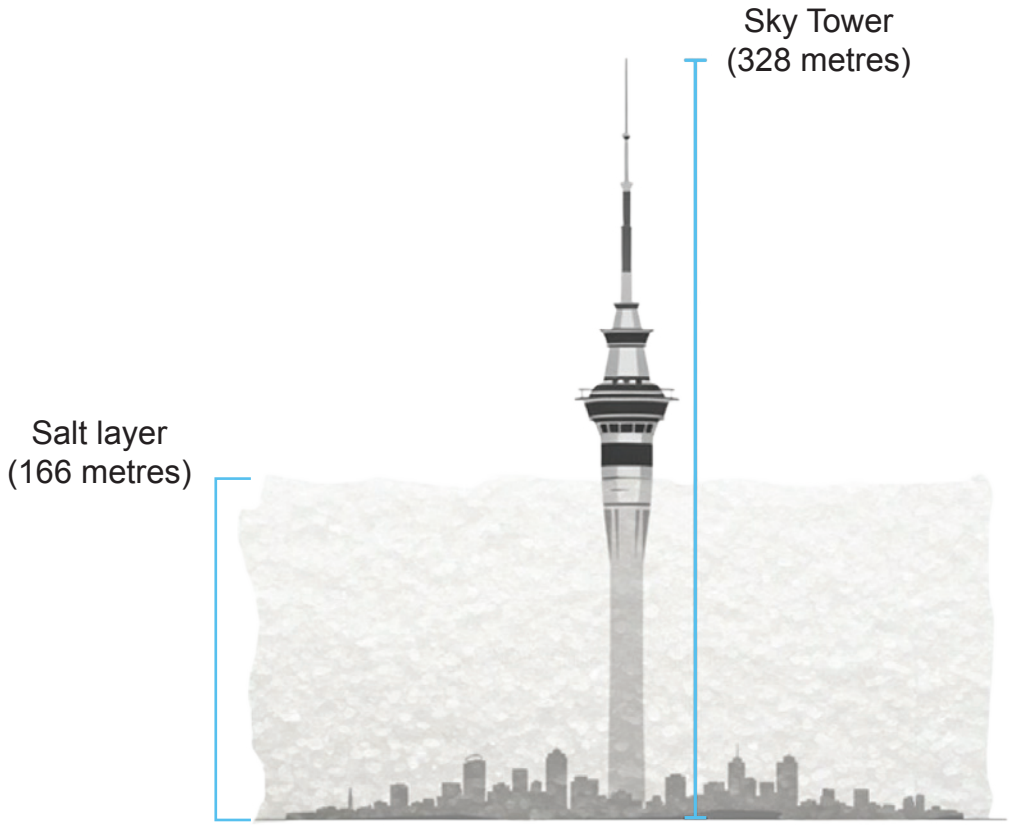

Cromwell is the New Zealand town furthest from the sea.

4(d) In a **straight line**, what is the shortest distance from Cromwell to the sea?

Round your answer to the **nearest 10 km**.

[ ] km

There is enough salt in the sea to cover the land surface of Earth with a layer of salt 166 metres high.

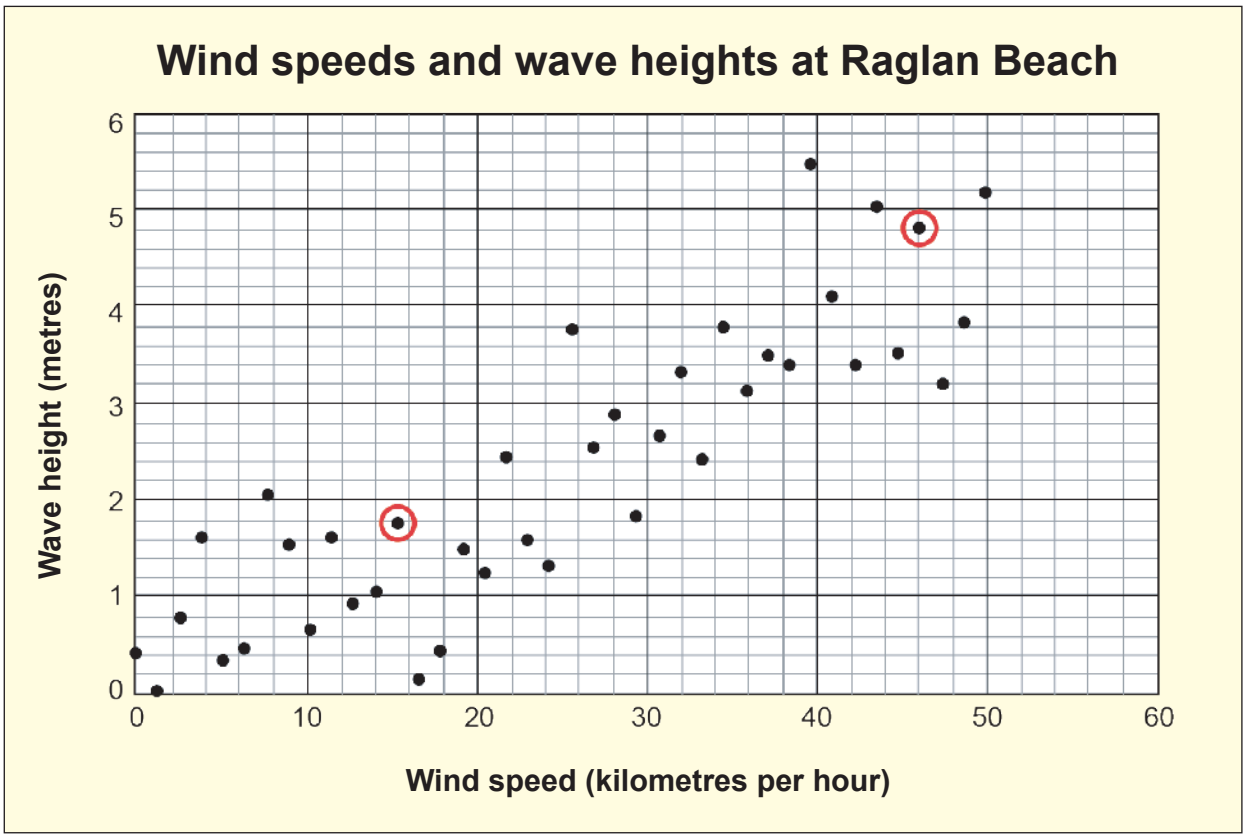



4(e) Would the salt layer come up to half the height of the Sky Tower?

Use calculations to explain your answer.

The graph below shows the wind speeds and wave heights at Raglan Beach.

Each dot shows both measurements taken at the same time.




4(f) What happens to wave height as wind speed increases?

Use the two points inside red circles to explain your answer.

## QUESTION FIVE: Dancing

A dance move is a group of actions, for example, clapping hands then stepping to the side.

Each dance move takes 8 beats.

The music plays at 120 beats per minute.

5(a) If the dance lasts for **3** minutes, how many moves are there?

[ ] moves

---

This image shows part of a dance move.



5(b) About how many degrees is the dancer's arm from their side?

(i) 45° ◯

(ii) 85° ◯

(iii) 105° ◯

(iv) 145° ◯

(v) 195° ◯

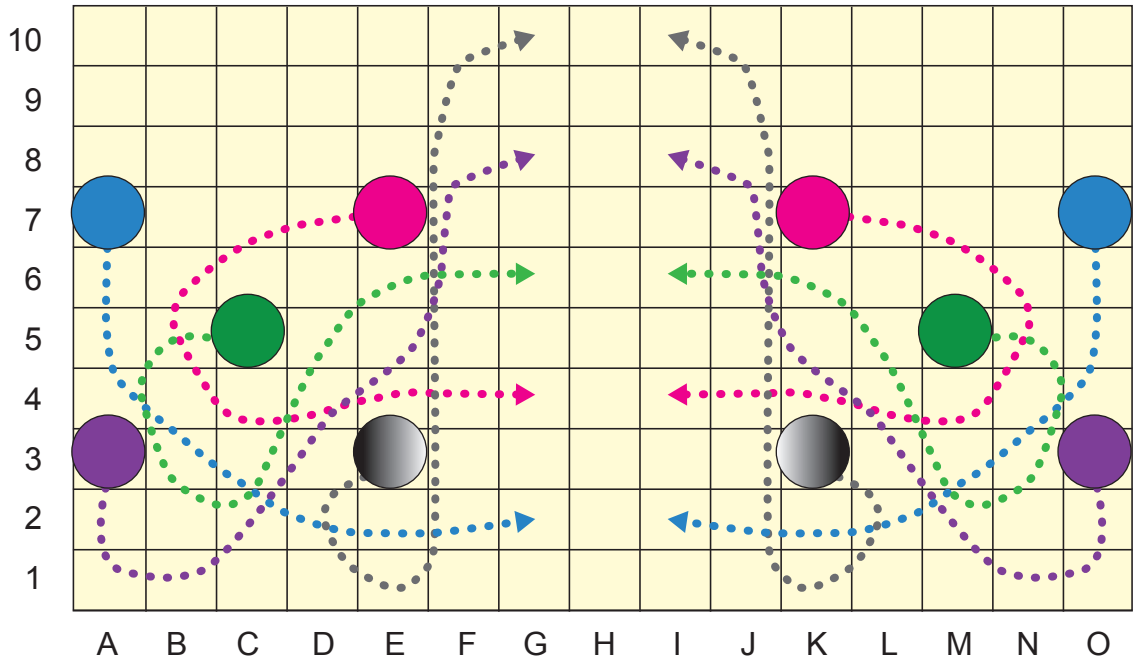
Dancers make symmetric and asymmetric shapes to add interest to the dance.

5(c) Select (✓) the image in which the dancer is symmetric (has a mirror line).

|  |  |  |  |
|---|---|---|---|
| (i) ◯ | (ii) ◯ | (iii) ◯ | (iv) ◯ |

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In this diagram, the circles are dancers.




A dancer starts at position (square) **E7**.

5(d) Enter a letter and a number to show which position the dancer finishes in.

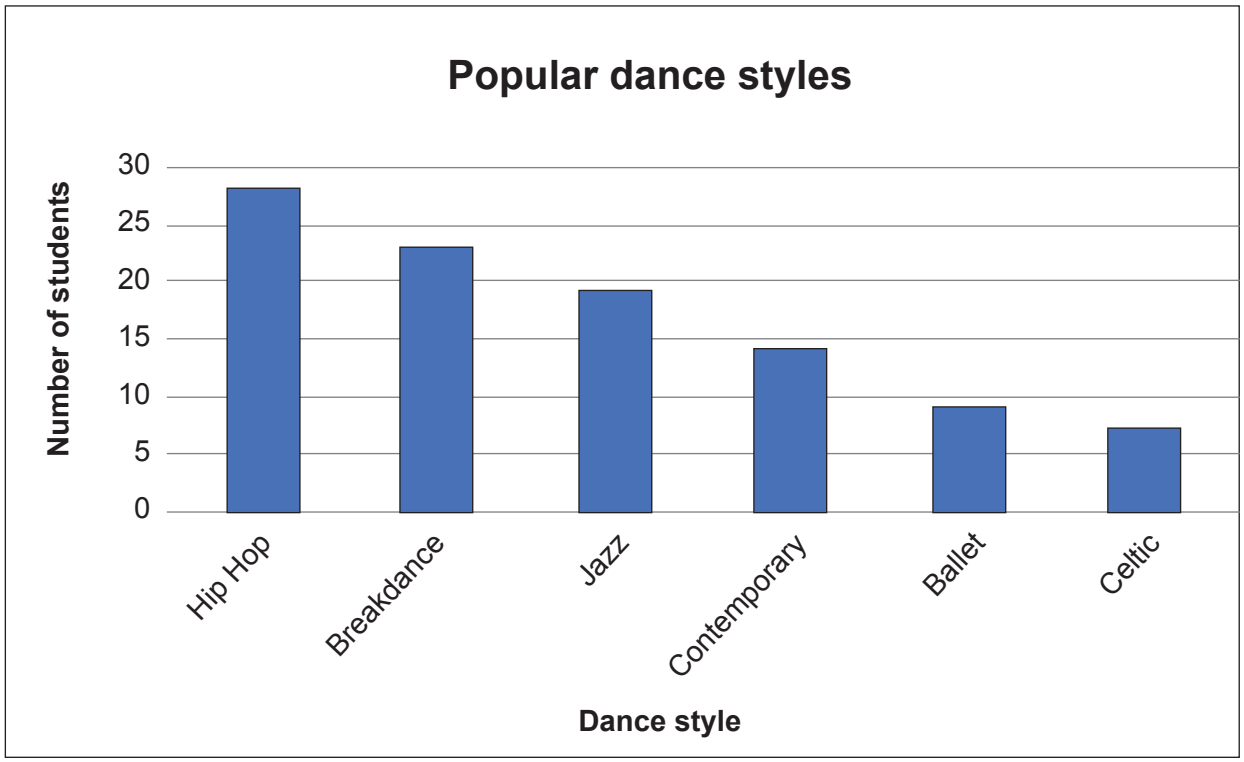
A dance school offers the following prices.




5(e) How much do you save **per lesson** by choosing the 5-lesson deal?

$ ☐ per lesson

This graph shows a number of dance students learning different dance styles.




5(f) Are there more students learning Hip Hop than Contemporary, Ballet, and Celtic combined?

Use the number of students from the graph to explain your answer.

**Extra space if required.**
**Write the question number(s) if applicable.**

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**Acknowledgements**

Material from the following sources has been adapted for use in this assessment:

**Question One**

Page 2: Liquid sweetener, created using generative AI
Butter, created using generative AI
Page 3: Milk jug, created using generative AI
Bowl and whisk for icon, https://stock.adobe.com/images/flat-line-icons-set-of-baking-and-pastry-tools/2028113035
Page 4: Cake tin, https://ecomstore.co.nz/products/bakemaster-loose-base-sq-deep-cake-pan-20-x-20-x-7cm-non-stick
Page 5: Monkeys, created using generative AI

**Question Two**

Page 6: Planets, https://www.skyatnightmagazine.com/space-science/facts-about-astronomy-space
Page 7: Moon phases, https://www.timeanddate.com/astronomy/moon/phases.html
Page 8: Halley's Comet, https://en.wikipedia.org/wiki/Halley%27s_Comet
Page 9: Asteroid, https://en.wikipedia.org/wiki/4_Vesta
Page 10: Planets, https://stock.adobe.com/images/the-planets-of-the-solar-system-isolated-on-white-background-3d-space-render-elements-of-this-image-are-furnished-by-nasa/255791889

**Question Three**

Page 11: Menu, created using generative AI
Page 12: Fish, https://www.instagram.com/p/DZPKpbNjc_M/
Battered fish, https://www.kuraplan.com/free-images/food_fish_and_chips
Google map, Google Maps 2026 / Maxar Technologies

**Question Four**

Page 14: Map, https://www.researchgate.net/figure/General-water-circulation-around-New-Zealand-Warm-and-cold-currents-are-shown-in-red-and_fig11_280720668
Page 15: Whale, AdobeStock_2029242063
Tree, AdobeStock_1901863942
Page 16: Sperm whale, https://www.discovery.com/nature/sperm-whales-are-loud-enough-to-burst-your-eardrums
Map, https://www.discovery-motorhomes.co.nz/catalogue/exque-10di.php
Page 17: Sky Tower, created using generative AI
Page 18: Information for graph, https://www.surf-forecast.com/breaks/Raglan-whale-Bay

**Question Five**

Page 19: Dance pose, created using generative AI
Page 20: Dance silhouettes, created using generative AI
Page 21: Dance poster, created using generative AI