

## Summary

### Test Identification

<b>Name</b>	2023 MAT SW 1.3
<b>Date Created</b>	30 Jan 2023
<b>Date Modified</b>	23 Mar 2023
<b>Subject</b>	Mathematics
<b>Status</b>	SCORED
<b>Sequence Number</b>	1301135
<b>Total Test Time</b>	53 minutes
<b>Delivery Method</b>	Onscreen

### Curriculum Strand

<b>Number Sense &amp; Operations</b>	14	<b>Number Knowledge</b>	11
<b>Statistics</b>	11	<b>Algebra</b>	14

### Curriculum Level

<b>2B</b>	4	<b>2P</b>	2	<b>2A</b>	1
<b>3B</b>	9	<b>3P</b>	15	<b>3A</b>	10
<b>4B</b>	2	<b>4P</b>	0	<b>4A</b>	3

### Cognitive Processing

<b>Surface</b>	28	<b>Deep</b>	18
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### Slider Settings

<b>Strands</b>		<b>Level</b>	
<b>Number Knowledge</b>	Most	<b>Level 2</b>	Few
<b>Number Sense &amp; Operations</b>	Most	<b>Level 3</b>	Most
<b>Algebra</b>	Most	<b>Level 4</b>	Few
<b>Statistics</b>	Most		

## Marking Guide : 2023 MAT SW 1.3

Q.No	Marking Key
1	c
2	b
3	>
4	<
5	=
6	c
7	b
8	a
9	b
10	b
11	c
12	6
13	3/4 or equivalent
14	2/3 or equivalent
15	2/5 or 3/5 'either answer acceptable for 1 mark'
16	b
17	b
18	145
19	\$150 + = \$295 or \$295 - \$150 =
20	d
21	c
22	c
23	d
24	a
25	a
26	a
27	b
28	c
29	d
30	b
31	c
32	d

### Instructions

**Underlined Questions** e.g. 10 :Use teacher judgement. Give 1 if answer matches marking guide (unless otherwise instructed). For incorrect answers give 0 (zero).

**All other Questions:** Enter the response chosen by the student using letters. For example, 'a' for the first option; 'b' for the second option; 'c' for the third option and so on.

**Questions Not Answered:** Enter a dash (-).

Q.No	Marking Key
33	c
34	b
35	b
36	d
37	a
38	a
39	c
40	a
41	d
42	a
43	a
44	b
45	b
46	c

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Instructions

**Underlined Questions** e.g. 10 :Use teacher judgement. Give 1 if answer matches marking guide (unless otherwise instructed). For incorrect answers give 0 (zero).

**All other Questions:** Enter the response chosen by the student using letters. For example, 'a' for the first option; 'b' for the second option; 'c' for the third option and so on.

**Questions Not Answered:** Enter a dash (-).

Choose a circle to show how much each sentence is like you

Very Unlike Me 1	Unlike Me 2	Like Me 3	Very Like Me 4
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**01.** It is very important to me to be good at maths.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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**02.** I try to get more maths answers right than my friends.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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**03.** I like hard, challenging maths.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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**04.** I do as much school work as possible in maths.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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**05.** I like to help my friends with their maths school work.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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**06.** I like it when the maths examples are hard.

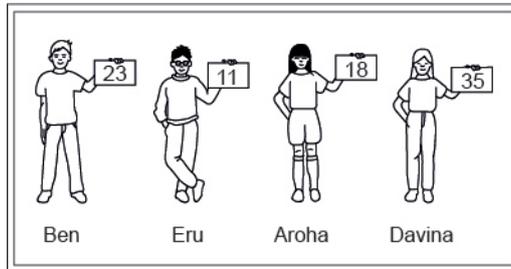
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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## Practice Questions

These practice questions are to help you understand how to show your answer for different types of questions.

**P01.** Who is holding a card with an even number on it?

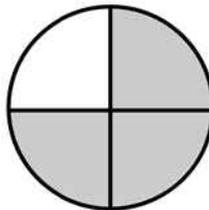


- Ben
- Eru
- Aroha
- Davina

**P02.** Complete this number pattern.

2, 4, \_\_\_\_\_, \_\_\_\_\_, 10

**P03.** What fraction of this circle is shaded?



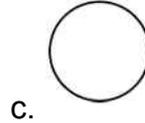
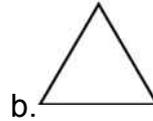
\_\_\_\_\_



**P04.** Match the sentence with the correct shape.

1. I have three sides

2. I have 4 sides



**P05.** Which numbers make this number sentence **TRUE**?

$$2 + \star > 5$$

1

2

3

4

5

**P06.** Put the numbers 1, 2, 3, and 4 in the boxes to order these numbers from biggest (1) to smallest (4).

 3 7 2 0

**P07.** Select whether the following statements are True or False.

In the number 213, the value of 1 is ten.

**TRUE**

**FALSE**

In the number 504, the value of 5 is fifty.

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**01.** 8, 12, 16, 20,

Which is the next number in the sequence?

- 22
- 25
- 24
- 23

**02.** Look at the symbol below.

+

When you see this symbol between two numbers, what does it mean?

- The two numbers are equal.
- You must add the two numbers.
- You must subtract the numbers.
- One number must be bigger than the other number.

**Use the following information to answer questions 03 to 05.**

Place =, > or < to make each number sentence true.

**03.**

12 \_\_\_\_\_ 9

**04.**

5 x 3 \_\_\_\_\_ 15 + 5

**05.**

4 + 2 \_\_\_\_\_ 6 x 1

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End of Section

06. The rule for the table is that numbers in each row and column must add up to the same number.

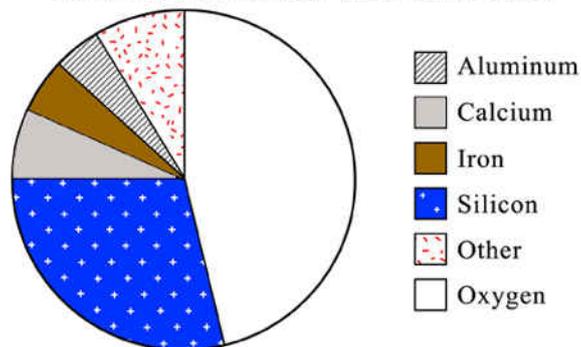
What number goes in the centre of the table?

4	11	6
9		5
8	3	10

- 1
- 2
- 7
- 12

07. According to the graph below, which element forms the second greatest portion of the earth's crust?

ELEMENTS THAT MAKE UP THE EARTH'S CRUST



- Oxygen
- Silicon
- Aluminium
- Iron
- Calcium

**08.** Which of the following has the greatest value?

- 12.1
- 0.97
- 4.23
- 5.08

**09.** Which number is missing from the numerical pattern?

20, 36, 52, \_\_\_\_, 84, 100, 116

- 64
- 68
- 76
- 78

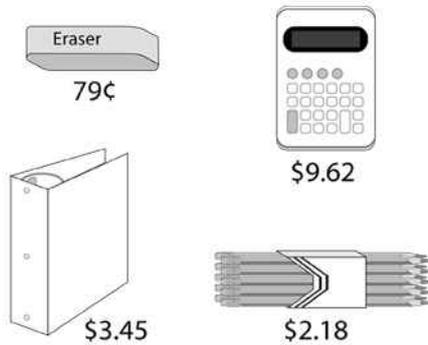
**10.** Peta was asked to write these numbers in order with the largest number first. Which number should come first?

465   645   456   449

- 465
- 645
- 456
- 449

11. Matt bought the items shown below at the school store. The prices shown include GST.

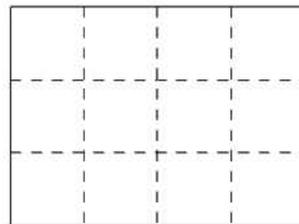
What was the total cost of these four items?



- \$14.84
- \$15.04
- \$16.04
- \$23.15

Use the following information to answer questions 12 to 14.

At a party, a cake was cut into pieces.



Cake

12. How many pieces are there in  $\frac{1}{2}$  of the cake?

\_\_\_\_\_

13. Write the fraction for 9 pieces of the cake?

\_\_\_\_\_

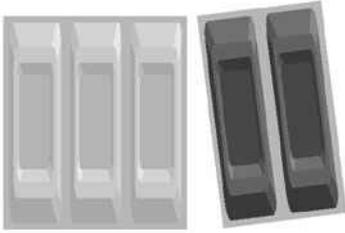
14. Ben ate 4 pieces of cake.

What fraction of the cake is left?

\_\_\_\_\_

End of Section

15. This block of chocolate is made up of five smaller pieces.



What fraction of the block has been removed?

\_\_\_\_\_

16. If  $\square$  represents the number of newspapers that Lee delivers each day, which of the following represents the total number of newspapers that Lee delivers in 5 days?

- $5 + \square$
- $5 \times \square$
- $\square + 5$
- $(\square + \square) \times 5$

17. Which of these is the number 5 005 014?

- Five million, five hundred and fourteen
- Five million, five thousand and fourteen
- Five thousand, five hundred and fourteen
- Five billion, five million and fourteen

Use the following information to answer questions 18 to 19.

Sam has saved \$150. He wants to buy a bike that costs \$295.

18. How much more money does he need?

\$ \_\_\_\_\_

19. Write an equation that Sam could use to solve this problem.

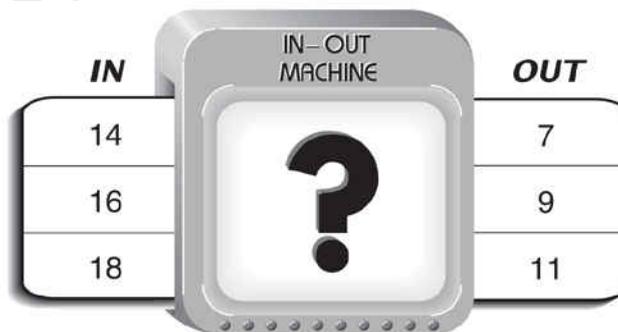
\_\_\_\_\_

End of Section

20. Which number is five hundred and three thousand, four hundred and seventy?

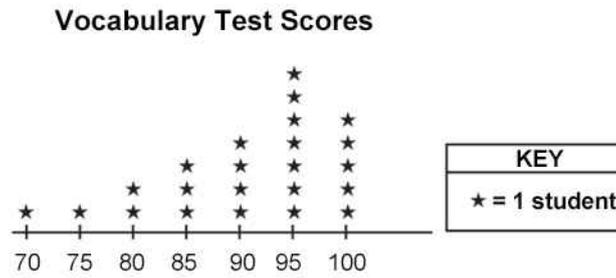
- 500 347
- 530 470
- 503 407
- 503 470

21. What is the rule that changes *In* numbers to *Out* numbers?



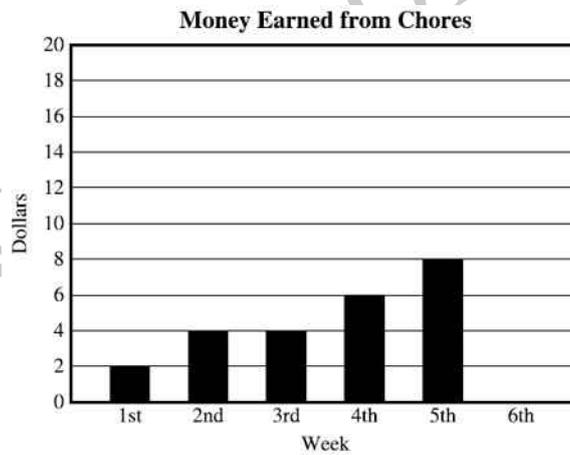
- Divide the In number by 2.
- Add 7 to the In number.
- Subtract 7 from the In number.
- Subtract 6 from the In number.

22. The line plot below shows how students scored on last week's vocabulary test. How many students scored 95 or higher on the test?



- 5 students
- 7 students
- 12 students
- 16 students

23. Darrell graphed the money he has earned for the past five weeks. If this pattern continues, what would be a reasonable prediction of his earnings for the sixth week?

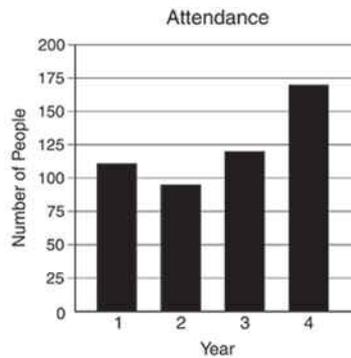


- Over \$20
- Between \$14 and \$18
- Between \$12 and \$14
- Between \$8 and \$10

24. The sum of a number ( $n$ ) and 14 is 72.  
Which equation shows this relationship?

- $14 + n = 72$
- $72n = 14$
- $14 - n = 72$
- $72 + n = 14$

25. The graph below shows the number of people attending the talent show on the last four years.  
Which is a **TRUE** statement about this graph?



- The attendance increased two years in a row.
- The attendance in Year 4 doubled the attendance in Year 1.
- The attendance decreased every year.
- The attendance increased every year.

26. Which does **NOT** equal 452?

- 3 hundreds, 5 tens, 12 ones
- 3 hundreds, 15 tens, 2 ones
- 4 hundreds, 5 tens, 2 ones
- 4 hundreds, 4 tens, 12 ones

27. Maxine runs a bakery. This is a list of the number of special requests she received each day in a two-week period.

Which of the following stem-and-leaf plots shows this same information?

16 29 28 15 22 25  
34 48 17 40 48 27

Stem	Leaf
1	3
2	5
3	1
4	3

Stem	Leaf
1	5, 6, 7
2	2, 5, 7, 8, 9
3	4
4	0, 8, 8

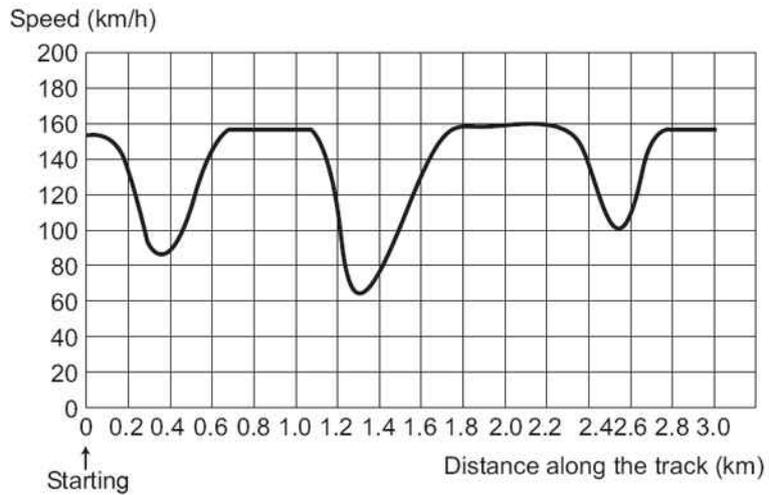
Stem	Leaf
1	5, 6, 7
2	2, 5, 7, 8, 8, 9
3	4
4	0, 8

Stem	Leaf
1	5, 6, 7
2	2, 5, 7, 8, 9
3	4
4	8, 8

Use the following information to answer question 28..

This graph shows the speed of a racing car along a flat 3 kilometre track during its second lap.

Speed of a racing car along a 3 km track (second lap)



28. Where was the lowest speed recorded during the second lap?

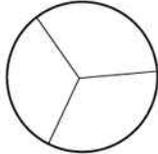
- At the starting line.
- At about 0.8 km.
- At about 1.3 km.
- Half way around the track.

End of Section

29. What is 4982 rounded to the nearest hundred?

- 4000
- 4900
- 4980
- 5000

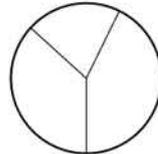
**30.** In Ms Jones' class of 36 students,  
12 students walk to school,  
18 students take the bus to school, and  
6 students are driven to school.  
Which circle graph represents Ms Jones' class?



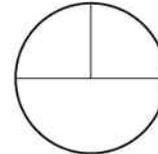
Graph 1



Graph 2



Graph 3



Graph 4

- Graph 1
- Graph 2
- Graph 3
- Graph 4

**31.** Which number is represented by  $n$ ?  
 $8 \times n = 128$

- 13
- 14
- 16
- 19

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32. Tran and Rajesh completed a class survey on favourite fizzy drinks. The results were recorded in this table. The survey shows us that

FAVOURITE DRINK	BOYS	GIRLS
Supa Kola	4	1
Top Pop	4	4
Dewy Mist	5	2
Lemonade	2	1
Don't like fizzy drink	1	3

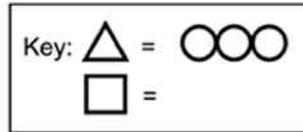
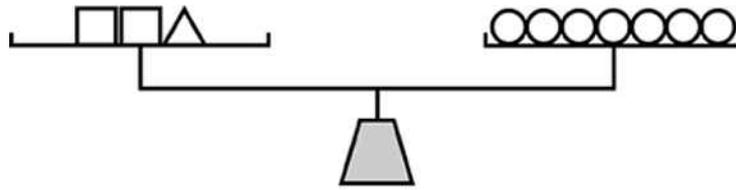
- more girls than boys drink fizzy drink.
- Dewy Mist is the most popular drink.
- everybody likes fizzy drink.
- lemonade is the least popular fizzy drink.

33. Which number goes into the box to make the statement **TRUE**?

$$4 \square 76\ 192 < 4\ 578\ 136$$

- 7
- 6
- 3
- 8

34. The squares, triangles and circles on the scale below make it balance exactly. In the Key, how many circles are needed to balance with the square?



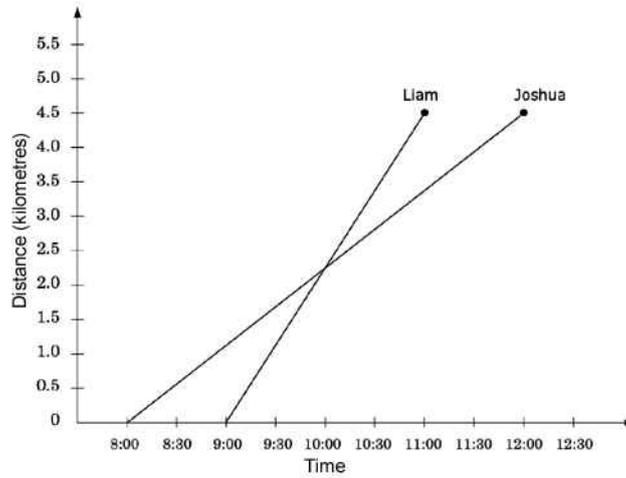
- $\circ$
- $\circ \circ$
- $\circ \circ \circ$
- $\circ \circ \circ \circ$

35. Which answer completes this subtraction?

$$\begin{array}{r} 13.63 \\ - 4.72 \\ \hline \end{array}$$

- 8.89
- 8.91
- 9.91
- 11.11

36. The graph represents the distance and time of a hike taken by Joshua and Liam. If they both started from the same place and walked in the same direction, at what time did they meet?



- 8:00
- 8:30
- 9:00
- 10:00
- 11:00

37. The list shows the scores achieved by each member of Jaime's discussion group on the last test.

71, 80, 62, 93, 68, 87, 73, 78

Which stem-and-leaf plot correctly displays the information?

- | Stem | Leaf    |
|------|---------|
| 6    | 2, 8    |
| 7    | 1, 3, 8 |
| 8    | 0, 7    |
| 9    | 3       |
- | Stem | Leaf    |
|------|---------|
| 6    | 2, 8    |
| 7    | 1, 3, 8 |
| 8    | 7       |
| 9    | 3       |
- | Stem | Leaf |
|------|------|
| 6    | 2    |
| 7    | 3    |
| 8    | 2    |
| 9    | 1    |
- | Stem | Leaf |
|------|------|
| 6    | 1, 0 |
| 7    | 1, 2 |
| 8    | 7    |
| 9    | 3    |

**38.** To prepare for a regional competition, Keith practised on his skateboard 12 hours each week for 18 weeks.

How many hours did Keith practise in all?

- 216
- 192
- 116
- 30

**39.** The chart shows the relationship between the time on the clock and the number of shirts Gary had finished ironing.

According to the data in the chart, how many minutes did it take Gary to iron each shirt?

**GARY'S IRONING**

<b>TIME</b>	<b>Total Number of Shirts Ironed</b>
8:15	0
8:31	2
8:47	4
9:03	6

- 2 minutes
- 6 minutes
- 8 minutes
- 48 minutes

**40.** The Smiths are planning to drive the 1038 kilometres from their home to the Grand Canyon. They plan to drive 689 kilometres the first day.

How many kilometres will they have left to drive to reach the Grand Canyon?

- 349
- 368
- 451
- 527

41. Laurie used five metres of fabric to make two costumes for the school play. How many metres of fabric would she need to make 20 more of these costumes?

- 8
- 27
- 40
- 50

42. The letters  $S$  and  $T$  stand for numbers. If  $S - 100 = T - 100$ , which statement is **TRUE**?

- $S = T$
- $S > T$
- $S = T + 100$
- $S > T + 100$

43. Two-thirds of the people present at the beginning of a meeting are men. Nobody leaves but 10 more men and 10 more women arrive at the meeting. Which of the following statements is **TRUE**?

- There would then be more men than women at the meeting.
- There would then be the same number of men as there are women at the meeting.
- There would then be more women than men at the meeting.
- From the information given, you cannot tell whether there would then be more women or men.

44. The chart below shows the plans that Central High School seniors have made for the year after graduation.

Which of the following is the **MOST** appropriate way to display the information in this chart?

**Senior's After-Graduation Plans**

Attend 4-year college	56
Attend 2-year college	25
Attend technical college	9
Enter work force	6
Other/Undecided	4

- Box-and-whisker plot
- Pie graph
- Scatterplot
- Stem-and-leaf plot

45. What is 4 hundredths written in decimal notation?

- 0.004
- 0.04
- 0.400
- 4.00
- 400.0

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46. Gary had a very heavy school bag. He wanted to investigate if his bag was a lot heavier than others at his school.



His best way to collect a sample of suitable data would be:

- Weigh all the heavy school bags from the class.
- Weigh all the heavy school bags from the school.
- Weigh a random sample of school bags from the school.
- Weigh a random sample of school bags from the class.

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Please provide these instructions to all staff involved with administering e-asTTle online.

## Before the testing session

### 1. Make sure students have the right devices and browsers installed

Unsupported devices may result in the test not displaying correctly and affect students' scores.

Desktop/Laptop	Tablet (9"+)
<ul style="list-style-type: none"> <li>Windows, Mac or Chromebook</li> <li>Minimum window width: 1280 pixels</li> <li>Windows devices need up-to-date Chrome, Edge or Firefox</li> <li>Windows tablets/hybrids e.g., Surface Pro must have a keyboard attached</li> <li>Mac devices need up-to-date Safari or Chrome</li> </ul>	<ul style="list-style-type: none"> <li><b>iPads:</b> The 2 most recent major iOS versions are supported. Students must use Safari.</li> <li><b>Androids:</b> The 2 most recent major Android versions are supported. Students must use up-to-date Chrome.</li> <li>Minimum window width: 768 pixels</li> </ul> <p><b>iPad Minis and small Androids must not be used.</b></p>

More information on device requirements and the underlying rationale is available on the [help site](#).

### 2. Sit the Practice Test

[A practice test for each subject](#) is available. These are also available in the Student Portal (no login required). Practice tests are designed to familiarise you and your students with e-asTTle online before sitting a real test. Each practice test contains attitude questions, look-over time and 5-8 questions designed to be relatively simple to answer. [Teacher scripts](#) are available for practice tests.

### 3. Ensure you have student login information

More information on accessing student logins and resetting passwords is available on the [help site](#).

### 4. Check if calculators are required (Maths/Pāngarau)

Tests with questions at mostly Level 5 and 6 require the use of calculators. Tests with questions at mostly Levels 2 to 4 do NOT require a calculator.

## During the testing session

### 1. Check equipment

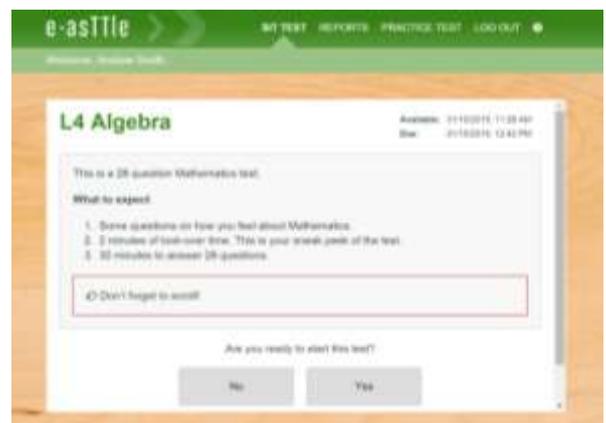
- Make sure students' devices are charged.
- Make sure students have scrap paper and a pen/pencil for working, calculators (if needed) and a quiet activity they can continue with if they finish early.

### 2. Read the Test Details to students

Once students select a test, they will see the test details page (example shown on right).

Read through this page aloud with your students.

Other reminders to discuss with students:



- Once they choose 'Yes', the timer starts. Once the timer is counting down, there is no way to pause the test. If students close the test accidentally, they can re-open it again, provided the timer hasn't finished.
- Ask students to raise their hand if something seems wrong.
- Fullscreen mode is recommended.

For students on iPad or Android tablet devices: remind them to lock their device in portrait mode.

For students on Windows hybrid devices (such as the Surface Pro): remind them to keep the keyboard attached during the test.

### 3. Supervising the test

Make sure you walk around and monitor students during the test. Students tend to continue with their test even if something has gone wrong – for example, a question does not display correctly. For this reason, check that pages are loading correctly, and students are scrolling to see all the content and options. It's a good idea to have a paper booklet of the test available during the testing session.

Students are generally expected to read the test content without assistance. Information on accommodations (e.g., reader-writers) is available on the [help site](#).

### 4. Know what to do if things go wrong

#### Internet disconnected

If student answers aren't saving, e-asTTle will show a yellow banner at the top of the page. The banner will turn red when there has been disconnection for 2 minutes or more. Students can keep answering whatever they can, and e-asTTle will try and save answers. Don't refresh or close the window if a coloured banner is showing.



If the Internet has been down, use your professional judgement to decide if students' results should be [excluded](#).

#### Images not loading

If an image is missing, students will see an icon they can click to try and reload the image.



#### A question doesn't load fully or looks strange

If something has loaded incorrectly, it can sometimes be corrected by selecting the 'Next' button then the 'Previous' button to reload the question.

Detailed troubleshooting information is available on the [help site](#). To report issues with online testing or for additional assistance, please contact the Education Service Desk: 0800 225 5428.