Summary

Test Identification	
Name	2021 MAT SW 1.3
Date Created	19 Jan 2021
Date Modified	25 Jun 2021
Subject	Mathematics
Status	SCORED
Sequence Number	1098011
Total Test Time	59 minutes
Delivery Method	Onscreen

Curriculum Strand			
Number Sense & Operations	13	**Number Knowledge**	11
Statistics	14	**Algebra**	12

Curriculum Level					
2B	3	**2P**	2	**2A**	1
3B	10	**3P**	14	**3A**	11
4B	3	**4P**	2	**4A**	1

Cognitive Processing			
Surface	23	**Deep**	24

Slider Settings			
Strands		**Level**	
Number Knowledge	Most	**Level 2**	Few
Number Sense & Operations	Most	**Level 3**	Most
Algebra	Most	**Level 4**	Few
Statistics	Most		

Marking Guide : 2021 MAT SW 1.3

Q.No	Marking Key
1	7
2	602
3	d
4	d
5	b
6	b
7	b
8	24
9	a
10	c
11	d
12	6
13	3/4 or equivalent
14	2/3 or equivalent
15	b
16	d
17	d
18	d
19	c
20	a
21	a
22	c
23	d
24	d
25	2 minutes
26	20
27	The bucket is full and the water is now overflowing (assuming depth of bucket is 60 cm) or the tap was turned off. 'Any equivalent answer for 1 mark.'
28	a
29	Indicates that the team performed very well. The points scored against them were confined very much to the lower end of the scale while the points they scored themselves were more widespread. 'Any equivalent answer for 1 mark.'

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
30	a
31	c
32	d
33	d
34	c
35	c
36	b
37	a
38	b
39	c
40	b
41	c
42	c
43	b
<u>**44**</u>	$20 of free calls
<u>**45**</u>	Estimate of difference is 13,000 + 1/2(13,000) + 1/5 (13,000) = 22,100 'Accept any value between 22,000 and 23,000'
46	c
47	c

<u>Instructions</u>

Underlined Questions e.g.   <u>**10**</u> :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	Unlike Me	Like Me	Very Like Me
	1	2	3	4
01. I like maths at school.	◯	◯	◯	◯
02. I am good at maths.	◯	◯	◯	◯
03. My teacher thinks I am good at maths.	◯	◯	◯	◯
04. My family/whānau think I am good at maths.	◯	◯	◯	◯
05. I enjoy doing maths in my own time (not at school).	◯	◯	◯	◯
06. I enjoy doing things in maths that I haven't tried before.	◯	◯	◯	◯

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?
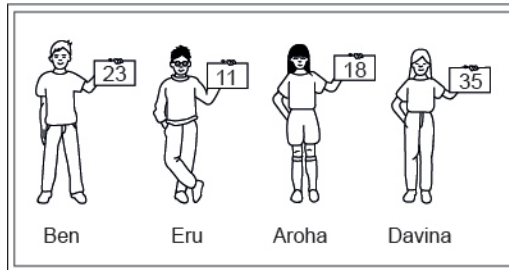
⬭   Ben

⬭   Eru

⬭   Aroha

⬭   Davina

P02. Complete this number pattern.

2, 4, ____, ____, 10

P03. What fraction of this circle is shaded?
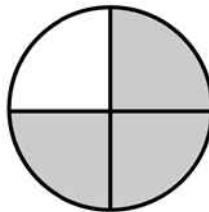
P04. Match the sentence with the correct shape.

1. I have three sides

2. I have 4 sides

a. (square)

b. (triangle)

c. (circle)
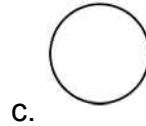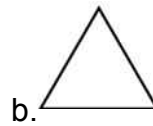
P05. Which numbers make this number sentence **TRUE**?

$$2 + \bigstar > 5$$

- [ ] 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.

	TRUE	FALSE
In the number 213, the value of 1 is ten.	⬯	⬯
In the number 504, the value of 5 is fifty.	⬯	⬯

01. On the number line below, what number goes in the box?
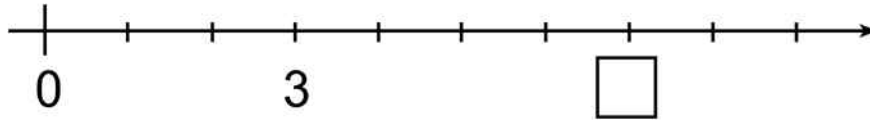
Number in box =_____

02. Write six hundred and two in digits.

_____

03. A piece of rope 204 cm long is cut into 4 equal pieces.
Which of these gives the length of each piece in centimetres?

◯   204 + 4

◯   204 × 4

◯   204 − 4

◯   204 ÷ 4

04. The graph shows the favourite sports of the students in Randy's class. How many fewer liked soccer than netball?

Favourite Sports

Activity	Number of Votes
Cricket	3
Rugby	6
Netball	10
Soccer	4

- ⬭ 3
- ⬭ 4
- ⬭ 5
- ⬭ 6

05. What fraction of the bones is in the bowl?

- ⬭ $\frac{4}{6}$
- ⬭ $\frac{4}{10}$
- ⬭ $\frac{6}{10}$
- ⬭ $\frac{1}{4}$

06. 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

Legend:
- Aluminum
- Calcium
- Iron
- Silicon
- Other
- Oxygen
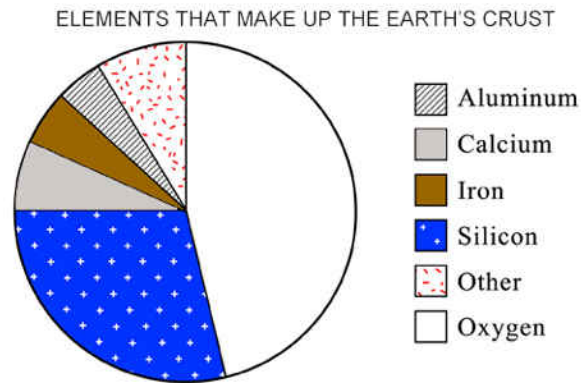
- ⬭ Oxygen
- ⬭ Silicon
- ⬭ Aluminium
- ⬭ Iron
- ⬭ Calcium

07. What is the value of the following when $B = 8$?
$72 \div B$

- ⬭ 8
- ⬭ 9
- ⬭ 63
- ⬭ 81

08. Johnny had 50 marbles.
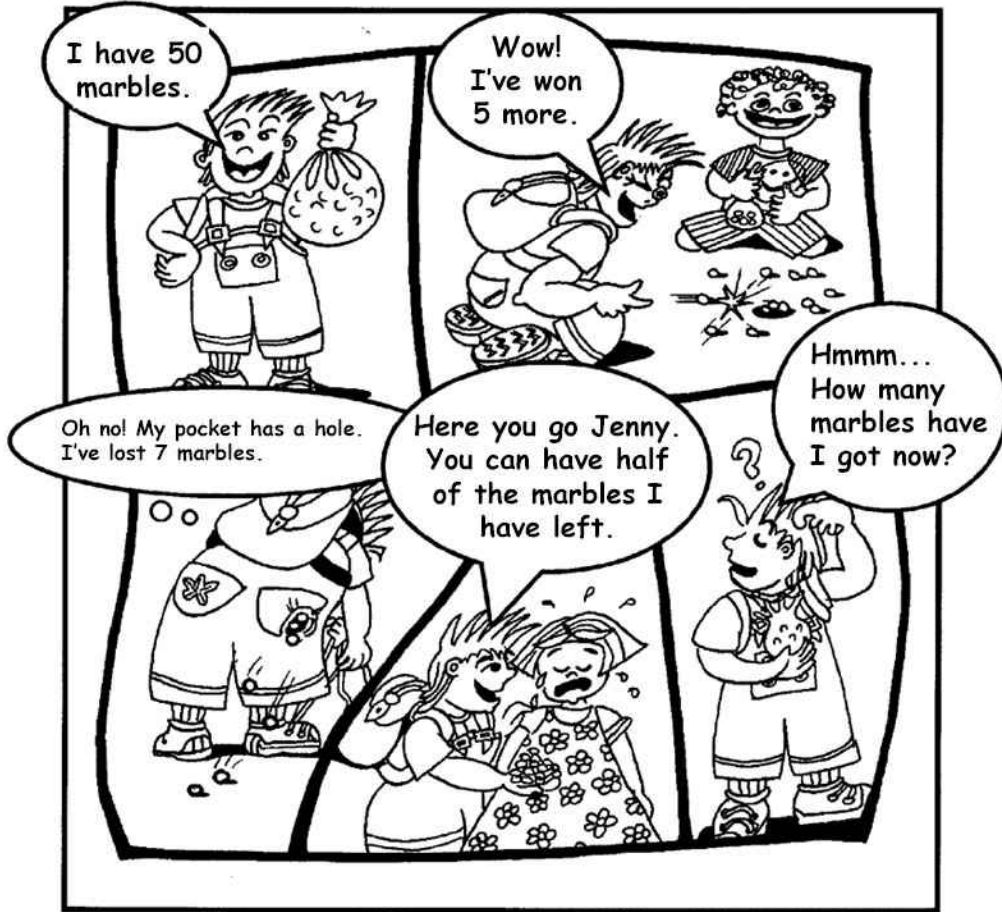
How many marbles does he have left?

_____

09. Which of the following has the greatest value?

- ◯ 12.1
- ◯ 0.97
- ◯ 4.23
- ◯ 5.08

10. Which **BEST** describes the location of point R on the number line shown below?
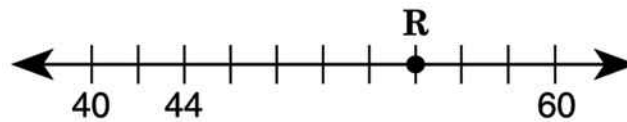
- ⬭ 49
- ⬭ 50
- ⬭ 54
- ⬭ 58

11. Which of the following will be a **TRUE** statement if an equal sign (=) is placed in the box?

- ⬭ $5 + 2 \ \Box \ 5 + 5$
- ⬭ $5 + 10 \ \Box \ 10 - 5$
- ⬭ $5 + 5 \ \Box \ 10 \times 2$
- ⬭ $5 + 5 \ \Box \ 2 \times 5$

Use the following information to answer questions 12 to 14.

At a party, a cake was cut into pieces.
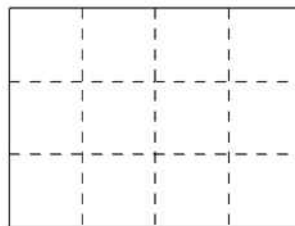
Cake

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?

_____

15. 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

16. Look at the pattern of shapes shown below.
If the pattern continues, what will the next 2 shapes look like?

△△△△△△△__

- ⬭
- ⬭
- ⬭
- ⬭

17. The average length of a song is 3 minutes.

About how many songs can be played in 16 minutes?

- ⬭ 48
- ⬭ 13
- ⬭ 6
- ⬭ 5

18. Kiri conducted a survey. She asked every student in Year 9, "What is your favourite subject or activity at school?"
She recorded her results in the table.
Kiri decided to display her data in a strip graph, using the key below.
Which strip graph **BEST** represents Kiri's data?

Table

Subject/Activity	No. of students
English	5
Maths	15
Sport	15
Lunch	5
Other	10

Key
- English
- Maths
- Sport
- Lunch
- Other

19. The sum of 32 796 + 47 580 is **BEST** described as

- ⬭ about 60 000.
- ⬭ about 70 000.
- ⬭ about 80 000.
- ⬭ about 90 000.

20. Wendy wants to take a survey to determine which flavour of ice cream is the **MOST** popular at her school.
Which of the following methods is the **BEST** way for her to choose a random sample of the students at her school?

  ○ Selecting ten students from each home room

  ○ Selecting members of the girls' softball team

  ○ Selecting members of the boys' basketball team

  ○ Selecting students who like her favourite flavour of ice cream

21. Janet took a survey of her class. She asked each student how he or she gets to school. Her results are shown below.
According to her results, which statement below is **NOT** true?

How Students Get to School

Ride a Bike	卌
Take the Bus	卌 卌 ||
Go by Car	卌	
Walk	||

  ○ More students go by car than take the bus.

  ○ More students ride a bike and walk than go by car.

  ○ More students take the bus than either walk or go by car.

  ○ More students ride a bike to school than walk.

22. The graph shows the number of pens, pencils, rulers, and erasers sold by a store in one week.

The names of the items are missing from the graph.

Pens were the items most often sold, and fewer erasers than any other item were sold.

More pencils than rulers were sold.

How many pencils were sold?

Items Sold by Store

◯　40

◯　80

◯　120

◯　140
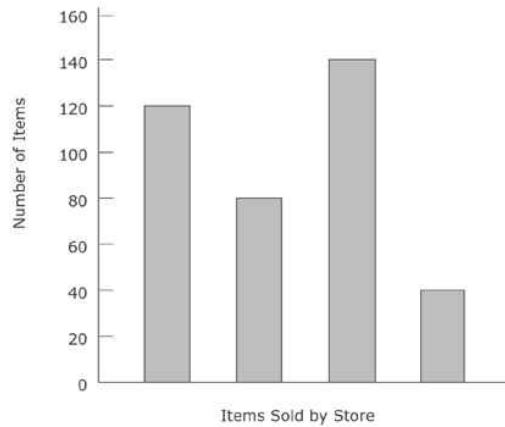
23. Cheryl went to a parking lot and tallied the number of cars of each colour that she saw there. She found that about 15% of the cars were green, about 20% were black, and about 15% were white. The rest were other colours.
Which pie graph **BEST** represents the results of Cheryl's tally?
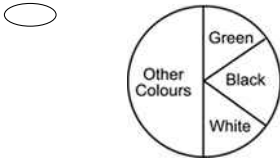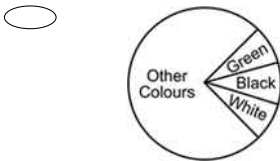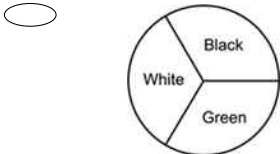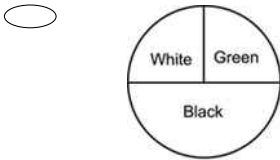
24. Anthony can run at the rate (in metres per minute) shown in the graph below.
Which of the following **BEST** describes Anthony's rate of speed?
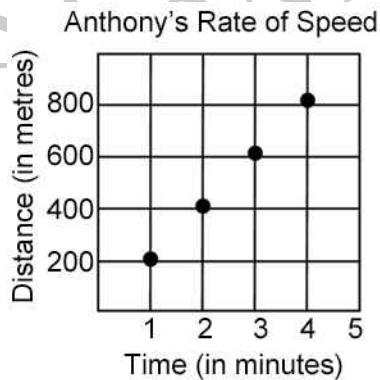
⬭   800 metres per minute

⬭   600 metres per minute

⬭   400 metres per minute

⬭   200 metres per minute

Use the following information to answer questions 25 to 27.

Water from a tap flowed into a bucket which had been partly filled with water. The depth of the water was measured as time passed and the results graphed.

Water level in bucket
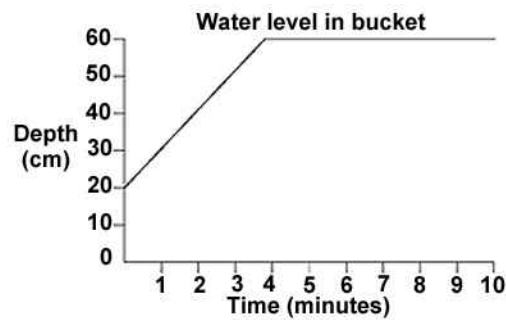
25. After how many minutes was the depth of water 40 centimetres?

_____ minutes

26. What depth of water was in the bucket before the tap was turned on?

_____ cm

27. Why does the graph level out after the fourth minute?

_____

_____

_____
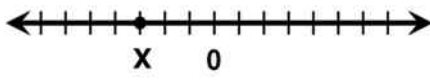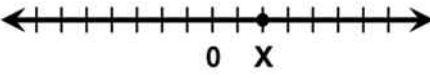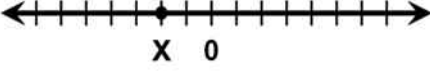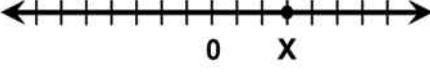
End of Section

28. Each space on these number lines is 1 unit long.
Which **BEST** shows X in the location of -3 on the number line?

○
    X   0

○
        0   X

○
        X   0

○
        0   X

Use the following information to answer question29..

This back-to-back stem-and-leaf graph shows the number of points a rugby league team scored and the number of points scored against them in one season.

Points against		Points scored
6, 6, 4, 4, 0, 0	0	6
8, 8, 6, 4, 4, 3, 2, 2, 2, 2, 0	1	2, 4, 4, 8, 8
9, 8, 6, 4, 2, 2 ,2, 2, 0	2	0, 4, 4, 6, 6, 7, 8
2	3	0, 2, 6, 8, 8
	4	0, 2, 2
	5	0, 4, 4, 6
	6	2, 6,

29. Using the information in the back-to-back stem-and-leaf graph how do you think the team performed in this season?

_____

_____

_____

_____

30. Which symbol should be placed in the circle to make this number sentence true?

$$\frac{4}{5} \bigcirc \frac{2}{7}$$

- ⬭ >
- ⬭ =
- ⬭ <

Use the following information to answer question31..

The graph shows how Rupert's weekly income is used.

Rupert's weekly budget

Rupert's weekly income is $440.

31. How much does Rupert spend on food in one week?

- ⬭ $90
- ⬭ $100
- ⬭ $110
- ⬭ $120

32. Marlene made 6 batches of muffins. There were 24 muffins in each batch.
Which of the following number sentences could be used to find the number of muffins she made?

○ $6 \times \square = 24$

○ $6 + 24 = \square$

○ $6 + \square = 24$

○ $6 \times 24 = \square$

33. Judy used the same rule on each number in column A to change it to a different number, which is shown in column B.
Which of the following was the rule Judy used?

Judy's Number Table

Column A		Column B
12	→	36
13	→	39
14	→	42
15	→	45

○   Add 24

○   Add 30

○   Divide by 3

○   Multiply by 3

34. Which of the following numbers, when rounded to the nearest thousand, becomes 27 000?

○   26 099

○   26 490

○   27 381

○   27 550

○   27 640

35. A piece of wood is 2.27 centimetres thick.
What is that measurement rounded to the nearest tenth of a centimetre?

- ⬭ 2.1
- ⬭ 2.2
- ⬭ 2.3
- ⬭ 2.5

36. The stem-and-leaf plot below shows how a class of Year 6 students scored on a maths test.
A score of 63 or higher is passing.
How many Year 6 students passed this maths test?

```
Year 6 Maths Scores
3 | 2
4 | 7
5 | 1 5 5 5 8
6 | 4 5
7 | 3 4 7
8 | 7 8
9 | 1 3 3 7 9 9
```
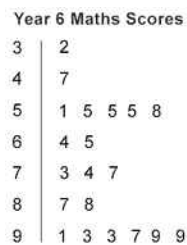
- ⬭ 7
- ⬭ 13
- ⬭ 11
- ⬭ 17

37. Which symbol goes in the blank to make the sentence **TRUE**?
7 centimetres ____ 7 metres

- ⬭ <
- ⬭ >
- ⬭ =
- ⬭ x

38. The graph below shows the number of sweets in each of five bags.
The number of sweets in these bags is *about*

Sweets in Bags
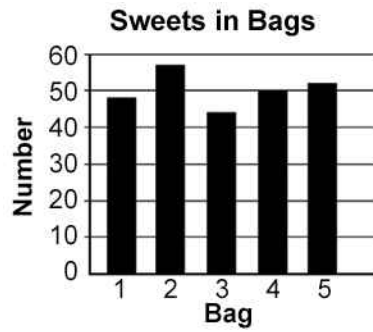
- ⬭ 40.
- ⬭ 50.
- ⬭ 55.
- ⬭ 60.

39. 1 mile = 5280 feet
How many feet are in 15 miles?

- ⬭ 352
- ⬭ 35 200
- ⬭ 79 200
- ⬭ 84 480
- ⬭ 89 760

40. The temperature in a freezer was -15ºC.
What would the temperature be if it rose by 6ºC?

- ⬭ -21ºC
- ⬭ -9ºC
- ⬭ 9ºC
- ⬭ 21ºC

41. How should you say 18.346?

○ Eighteen point three hundred and forty-six

○ One eight point three hundred and forty-six

○ Eighteen point three four six

○ One eight point three forty-six

42. Marta has a garden. Every week more flowers grow.
One flower grows during week 1. Three flowers grow during week 2. The pattern continues, as shown in the table below.
How many flowers grow during week 9?

WEEK	FLOWERS
1	1
2	3
3	6
4	10
5	15

○ 37

○ 40

○ 45

○ 56

43. What value of x satisfies the following?
$4x + 12 = 100$

○ 13

○ 22

○ 28

○ 37

Use the following information to answer questions 44 to 45.

Here is a graph of Mrs Grant's reward points from her telephone company.

She can exchange her points for rewards as shown below.

Points Exchange

- $20 of free Toll Calls
- Caller Display 12 month Service
- 50 000 Talking Points

Where you're at
Well done! You're well on the way towards
Caller Display 12 month Service.
If you'd like to redeem your points, check your
Rewards Guide or call us free on
0800 Thanks (0800 842657).
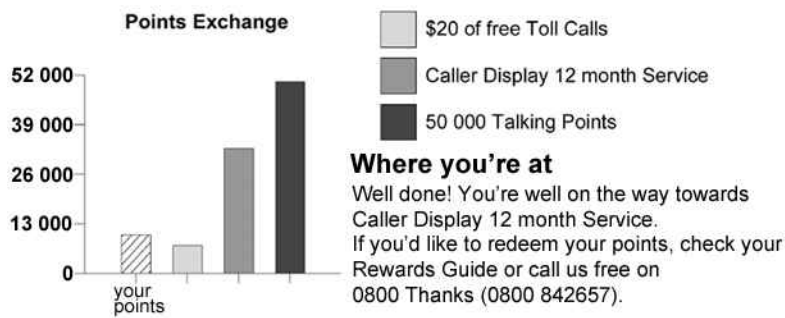
44. What reward could Mrs Grant exchange her points for now?

_____

45. The bill says she is "well on her way" to a Caller Display 12 month Service.

How many more points does she need for this?

_____

End of Section

46. Joe had three test scores of 78, 76, and 74, while Mary had scores of 72, 82, and 74. How did Joe's average (mean) score compare with Mary's average (mean) score?

⬭   Joe's was 1 point higher.

⬭   Joe's was 1 point lower.

⬭   Both averages were the same.

⬭   Joe's was 2 points higher.

⬭   Joe's was 2 points lower.

47. Which rule describes the pattern shown in the table?

□	△
4	9
5	11
6	13
7	15

○   □+5=△

○   □+□=△

○   □+□+1=△

○   □+□+2=△

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	Large Tablets (9"+)
- Windows, Mac or Chromebook - Minimum window width: 1280 pixels - Windows devices need up-to-date Edge, Chrome, Firefox or IE11 - Windows tablets/hybrids e.g., Surface Pro must have a keyboard attached - Mac devices need recent Chrome or Safari	- iPads: iOS 10+ with Safari - Androids: Large tablet e.g., Samsung Galaxy Tab 4. Must have Android 5+ and latest Chrome - Minimum window width: 768 pixels iPad Minis and small Androids must not be used.

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.
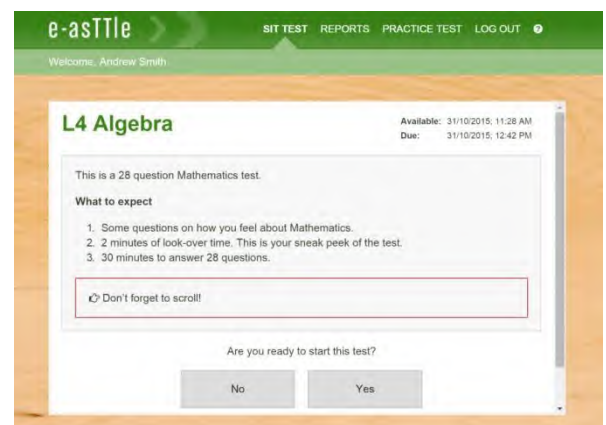
Other reminders to discuss with students:

- 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.

3 answers still saving...You can keep going.	
34:50 test time left	Question 4 of 30

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.