

## Summary

### Test Identification

<b>Name</b>	2020 MAT SW 1.3
<b>Date Created</b>	29 Jan 2020
<b>Date Modified</b>	10 Mar 2020
<b>Subject</b>	Mathematics
<b>Status</b>	SCORED
<b>Sequence Number</b>	1005037
<b>Total Test Time</b>	57 minutes
<b>Delivery Method</b>	Onscreen

### Curriculum Strand

<b>Number Sense &amp; Operations</b>	15	<b>Number Knowledge</b>	10
<b>Statistics</b>	13	<b>Algebra</b>	10

### Curriculum Level

<b>2B</b>	3	<b>2P</b>	0	<b>2A</b>	3
<b>3B</b>	9	<b>3P</b>	17	<b>3A</b>	7
<b>4B</b>	2	<b>4P</b>	2	<b>4A</b>	2

### Cognitive Processing

<b>Surface</b>	23	<b>Deep</b>	22
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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 : 2020 MAT SW 1.3

Q.No	Marking Key
1	a
2	a
3	d
4	43, 71
5	Add 7 'Any equivalent answer for 1 mark.'
6	b
7	d
8	d
9	a
10	c
11	d
12	6
13	$\frac{3}{4}$ or equivalent
14	$\frac{2}{3}$ or equivalent
15	c
16	b
17	b
18	d
19	a
20	a
21	a
22	a
23	b
24	d
25	d
26	c
27	d
28	b
29	c
30	400+120+7 OR 5 hundreds + 1 ten + 17 ones OR any correct equivalent 'Accept correct alternatives that sum to 527'
31	1482

#### 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
32	a
33	b
34	d
35	d
36	a
37	c
38	c
39	b
40	d
41	c
42	b
43	b
44	a
45	Fold string in half, cut, then fold again and cut. 'Or equivalent solution'

ADMINISTER ONLINE ONLY

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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.** I think maths is exciting and interesting.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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**02.** I never get tired of doing maths.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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**03.** I like to do and think about maths outside of school.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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**04.** I think maths helps me to understand life.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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**05.** I think that maths helps people make important decisions.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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**06.** Maths is NOT boring.

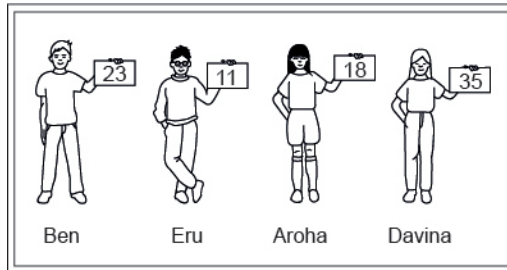
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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## Practice Questions

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?

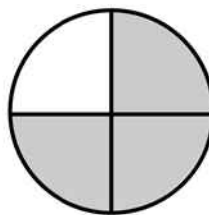


- Ben
- Eru
- Aroha
- Davina

**P02.** Complete this number pattern.

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

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



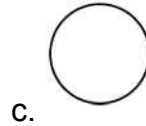
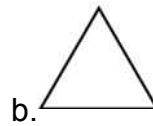
\_\_\_\_\_



**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.

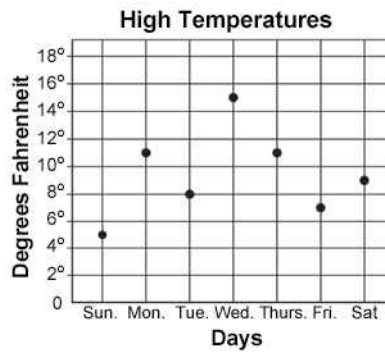
**TRUE**

**FALSE**

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


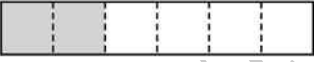


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ONLY

**01.** The graph below shows the high temperatures in Bangor for one week in January. On which two days was the high temperature the same?



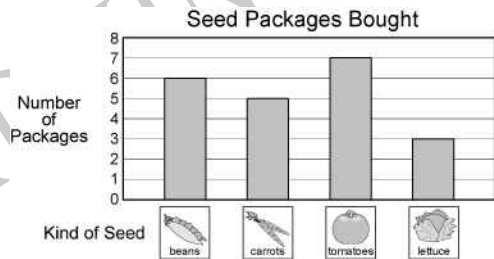
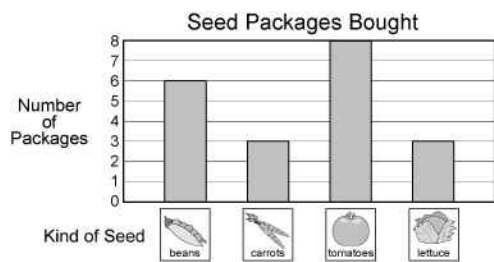
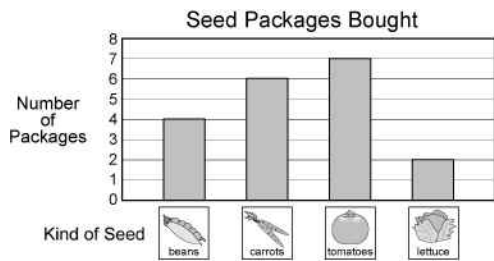
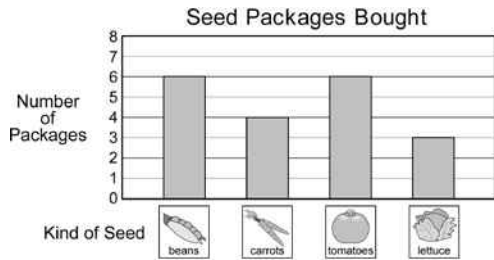
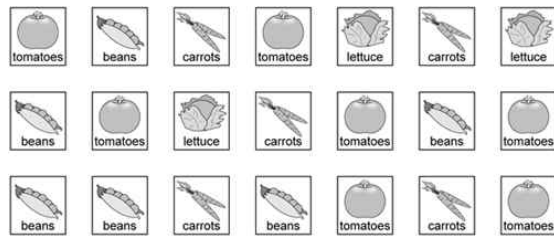
- Monday and Thursday
- Monday and Saturday
- Tuesday and Friday
- Tuesday and Saturday

**02.** Look at the fraction bars. Which fraction bar shows one-sixth shaded?

- 
- 
- 
- 



03. Robert bought the packages of seeds shown below.  
Which bar graph correctly shows the number of packages Robert bought?



Use the information to answer questions 04 to 05.

36, \_\_, 50, 57, 64, \_\_

04. Complete this pattern.

36, \_\_\_\_\_, 50, 57, 64, \_\_\_\_\_

05. What is the rule for this pattern?

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End of Section

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



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

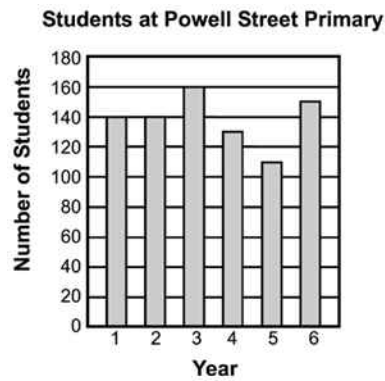
07.

$\star > 24$  The value of the  $\star$  could be

- 2
- 4
- 24
- 42

**08.** The graph shows the number of students in each Year at Powell Street Primary School.

About how many more students are in Year 6 than Year 5?



- 12
- 20
- 31
- 40

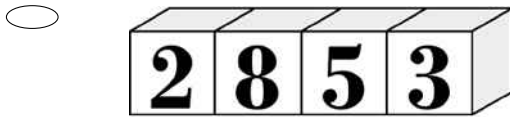
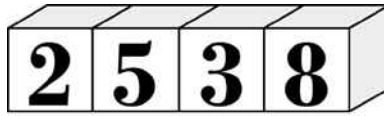
**09.** Which of the following has the greatest value?

- 12.1
- 0.97
- 4.23
- 5.08

**10.** Tom read 11 books in Year 1, 16 books in Year 2, and 18 books in Year 3. Estimate how many books Tom has read.

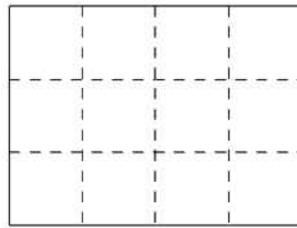
- 10
- 30
- 50
- 70

11. John made a number with the blocks shown below.  
 Sonya used the same blocks to make a number **less** than John's number.  
 Which could be the number Sonya made?



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?

\_\_\_\_\_

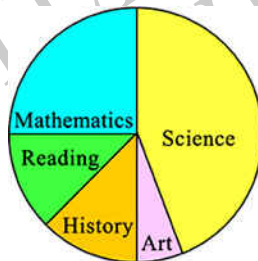
End of Section

15. Which of the following is **TRUE**?

- 653 > 660
- 653 < 642
- 662 < 670
- 670 > 682

16. The pie chart below shows the portion of time Pat spent on homework in each subject last week.

If Pat spent 2 hours on mathematics, about how many hours did Pat spend on homework altogether?



- 4
- 8
- 12
- 16

17.  $18\,416 - 5\,037 =$

- 13 339
- 13 379
- 13 429
- 13 479

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.

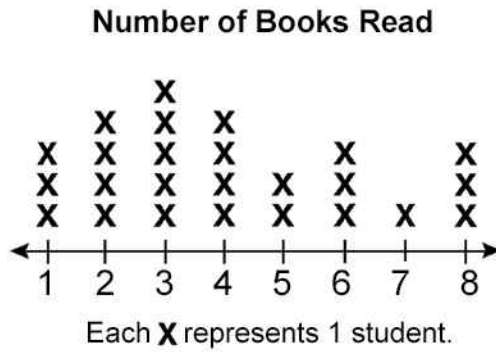
Which strip graph **BEST** represents Kiri's data?

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

- 
- 
- 
- 

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19. The line plot below shows the number of books each student in Marcia's class read over the summer.  
How many more students read exactly 3 books than students who read exactly 7 books?

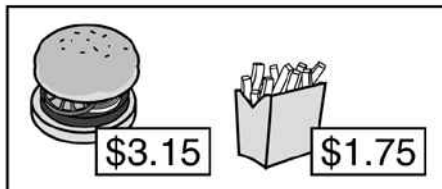
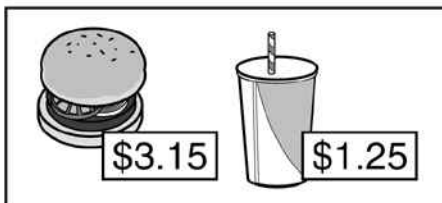
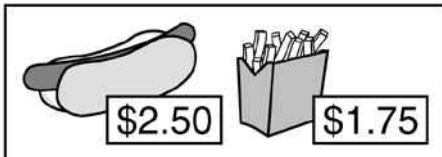
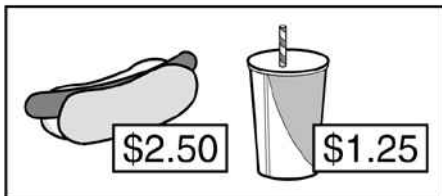


- 4
- 5
- 6
- 7

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20. Tyrone has \$20 to spend at the basketball game. He must use part of the amount to pay for his ticket.

If the ticket costs \$15.95, which of the following would he also be able to buy?



21. Joan needs \$60 for a class trip.

She has \$32. She can earn \$4 an hour mowing lawns.

If the equation shows this relationship, how many hours must Joan work to have the money she needs?

$$4h + 32 = 60$$

7 hours

17 hours

23 hours

28 hours



**22.** 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

**23.** The Sports Store was selling running shoes at a special sale price. The normal price is \$60.80. They were reduced by  $\frac{1}{4}$  of the normal price.  
How much were they reduced by?



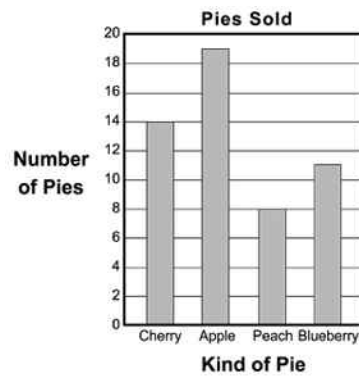
- \$12.20
- \$15.20
- \$45.60
- \$48.60

24. Which is a word problem for the number sentence?

$$8 + 6 =$$

- Jon baked 8 pies and gave 6 of them away.  
How many pies does he have left?
- Theresa has 8 fish bowls. He has 6 fish in each bowl.  
How many fish are there in all?
- Mai found 8 plants. She counted 6 flowers on each.  
How many flowers did she count?
- Leon put 8 bananas and 6 apples in a fruit bowl.  
How many pieces of fruit did he put in the bowl?



25. The bar graph shows the number of pies sold during a bake sale.  
How many more apple pies were sold than peach?



- 5
- 8
- 10
- 11

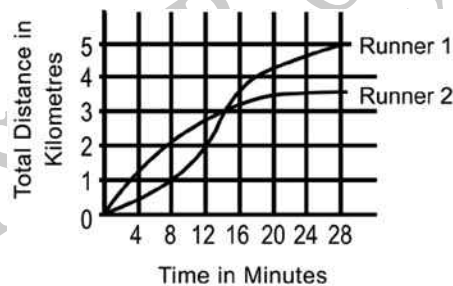
26.

Clear Lake	8000
Rancho Santa Fe	4000
Bull Shoals	1500
Beaver City	750
Jeffersonville	500

A pictogram of the data above is to be drawn using  as the symbol that represents 500 people.  
How many  would it take to represent the population of Rancho Santa Fe?

- 1
- 4
- 8
- 80
- 4000

27. The total distance covered by two runners during the first 28 minutes of a race are shown in the graph below.  
How long after the start of the race did one runner pass the other?



- 3 minutes
- 8 minutes
- 12 minutes
- 14 minutes
- 28 minutes

28. 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

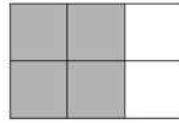
Stem	Leaf
1	5, 6, 7
2	2, 5, 7, 8, 9
3	4
4	0, 8, 8

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

PREVIOUS SCREEN ONLY

**29.** In this diagram, 2 out of every 3 squares are shaded.  
Which diagram has 3 out of every 4 squares shaded?



- 
- 
- 
- 

**Use the following information to answer questions 30 to 31.**

Two different ways of representing the number 527 are shown below.

$$527 = 500 + 20 + 7$$

$$527 = 4 \text{ hundreds} + 11 \text{ tens} + 17 \text{ ones}$$

**30.** Show another way to represent 527.

$$527 = \underline{\hspace{2cm}}$$

**31.** One way of representing a number is shown below.

$$1 \text{ thousand} + 3 \text{ hundreds} + 18 \text{ tens} + 2 \text{ ones}$$

What is the number that is represented?

\_\_\_\_\_

End of Section

32. If the sum of 39 and 66 is divided by 3, the result is

- 35
- 61
- 79
- 315

33. The chart below shows the number of points awarded for first, second, third, and fourth place.

Mr Hall's class came in first in the 50-metre dash, fourth in the 3-legged race, second in the obstacle course, first in the frisbee toss, and fourth in the water relay. There is one more event.

The class wants to reach a total score of 36 points.

What place do they need to win in order to reach their goal of 36 total points?

Place	Points
First Place	10
Second Place	7
Third Place	5
Fourth Place	2

- Second place
- Third place
- Fourth place
- They have already scored 36 points.

34. What is the rule used in the table below?

Input	Output
1	3
2	6
3	9
4	?

- Add 2 to the input
- Multiply the input by 2
- Add 3 to the input
- Multiply the input by 3

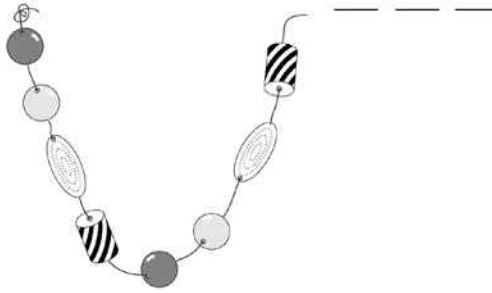
35. Which statement below is **TRUE**?

Student Ski Lift Passes  
Sold at Jiminy Peak

Day of the Week	Number of Passes Sold
Thursday	58
Friday	163
Saturday	200
Sunday	175
Monday	22

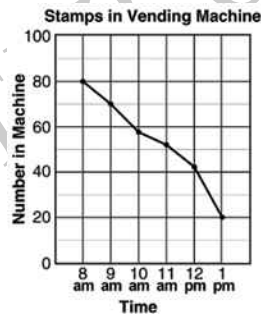
- More student passes were sold on Friday than on Sunday.
- Altogether, more than 500 student passes were sold on Saturday and Sunday.
- More than 800 passes were sold during this five-day period.
- More student passes were sold on Thursday and Friday than on Sunday and Monday.

36. Elsa is using a pattern to string the beads shown below.  
If the pattern continues, what will the 11th bead look like?



- 
- 
- 
- 

37. The graph below shows how the number of books of flower stamps in a vending machine changed over a period of hours.  
Which is **closest** to the number of books of stamps in the machine at 11 am?



- 41
- 46
- 52
- 59

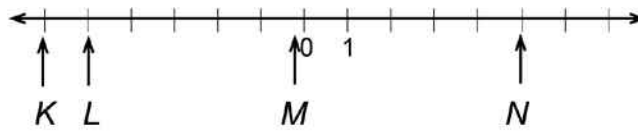


38. The total area of a wall is  $18\text{m}^2$ . A roll of wallpaper covers  $8\text{m}^2$ . The store sells only full rolls.

What is the **fewest** number of rolls needed to cover the wall?

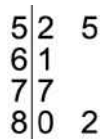
- 1 roll
- 2 rolls
- 3 rolls
- 4 rolls

39. Which arrow shows the location of  $-5$  on the number line?



- K
- L
- M
- N

40. Gloria's diving scores from a recent competition are represented in the stem and leaf plot shown below. In this plot,  $3|4$  would be read at 3.4. What was her lowest score for this competition?



- 0.02
- 1.0
- 2.5
- 5.2
- 8.0

41. Christy has 88 photographs to put in her album.

If 9 photographs will fit on each page, how many pages will she need?

- 8
- 9
- 10
- 11

42. The sum of  $x$  plus  $y$  equals 26.

If  $x = 17$ , which equation can be used to find the value of  $y$ ?

- $y - 17 = 26$
- $17 + y = 26$
- $x - y = 26$
- $x + 17 = 26$

43. City bus No. 14 arrives at Grand Street every 10 minutes, starting at 6:00 am.

The dispatcher is setting the schedule for an additional bus that will arrive at Grand Street every 20 minutes. The dispatcher does **NOT** want the two buses to arrive at Grand Street at the same time.

Which of these starting times will be **BEST** for the additional bus?

- 6:00 am
- 6:05 am
- 6:10 am
- 6:30 am

**44.** What is the difference between the smallest positive 3-digit number and the largest positive 2-digit number?

- 1
- 9
- 10
- 90
- 900

**45.** Brett needs to cut a piece of string into four equal pieces without using a ruler or other measuring instrument.

Put directions to tell Brett how to do this.

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ADMINISTER ON SCREEN ONLY

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

- 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

#### Large Tablets (9" +)

- 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

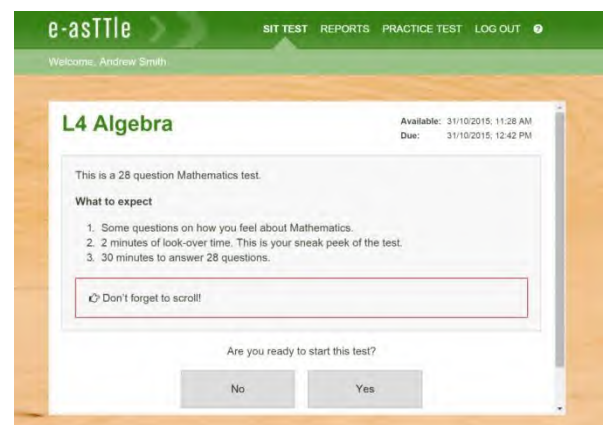
### 1. Check equipment

- 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.



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.  **INFO MISSING**  
[Click to reload](#)

#### 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.