

## Summary

### Test Identification

<b>Name</b>	2022 MAT SW 1.3
<b>Date Created</b>	07 Jan 2022
<b>Date Modified</b>	11 Apr 2022
<b>Subject</b>	Mathematics
<b>Status</b>	SCORED
<b>Sequence Number</b>	1195258
<b>Total Test Time</b>	57 minutes
<b>Delivery Method</b>	Onscreen

### Curriculum Strand

<b>Number Sense &amp; Operations</b>	19	<b>Number Knowledge</b>	9
<b>Statistics</b>	10	<b>Algebra</b>	10

### Curriculum Level

<b>2B</b>	3	<b>2P</b>	1	<b>2A</b>	1
<b>3B</b>	11	<b>3P</b>	13	<b>3A</b>	9
<b>4B</b>	4	<b>4P</b>	0	<b>4A</b>	3

### Cognitive Processing

<b>Surface</b>	27	<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 : 2022 MAT SW 1.3

Q.No	Marking Key
1	c
2	a
3	d
4	July
5	70 mm 'Allow 1 mm either side of correct answer (that is 69-71 mm)'
6	d
7	d
8	b
9	a
10	c
11	d
12	c
13	May, June and July 'Months do not have to be in order of popularity. One mark'
14	b
15	c
16	6
17	$\frac{3}{4}$ or equivalent
18	$\frac{2}{3}$ or equivalent
19	c
20	b
21	d
22	b
23	b
24	c
25	b
26	d
27	c
28	d
29	c
30	c
31	d
32	a

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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 (-).

Q.No	Marking Key
33	c
34	b
35	d
36	b
37	c
38	d
39	60 - 75 biscuits 'Accept any single value between 60 and 75'
40	(3,12)
41	Appropriate combination of activity and emotion. Example: mum leaves, beginning to be kind of scared 'Give mark if reason plausible and accurate use of vertical scale demonstrated'
42	Appropriate combination of activity and emotion. Example: hears a strange noise, extremely scared. 'Give mark if reason plausible and accurate use of vertical scale demonstrated'
43	Appropriate combination of activity and emotion. Example: goes to sleep, not scared. 'Give mark if reason plausible and accurate use of vertical scale demonstrated'
44	a
45	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.

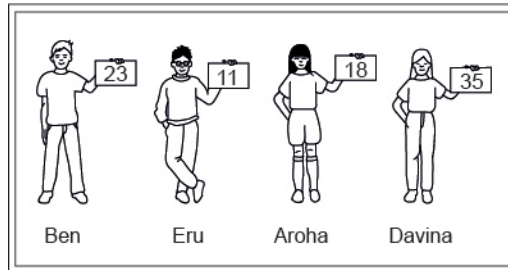
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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ADMINISTER ON SCREEN ONLY

## 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?

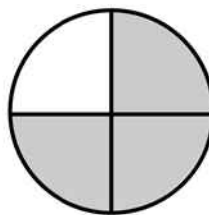


- Ben
- Eru
- Aroha
- Davina

**P02.** Complete this number pattern.

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

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



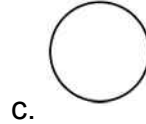
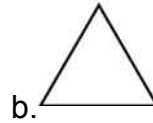
\_\_\_\_\_



**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**

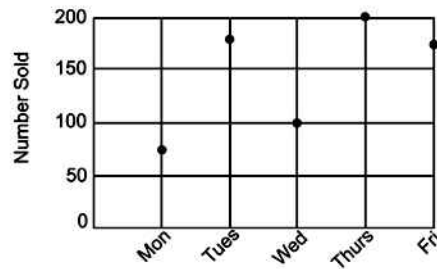
**FALSE**

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

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ONLY

01. According to the graph below, about how many sandwiches were sold on Tuesday?

NUMBER OF SANDWICHES SOLD IN FIVE DAYS



- 100
- 150
- 180
- 200

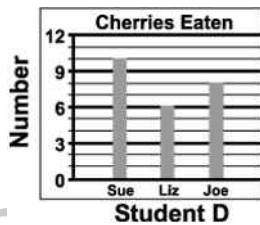
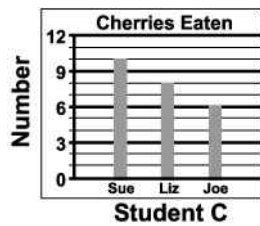
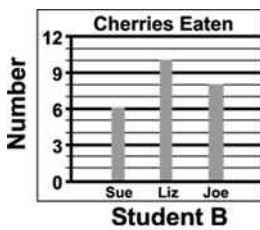
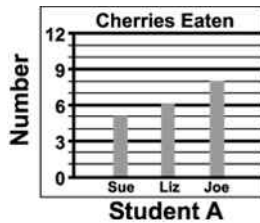
02. If I had \$9.45 and spent \$3.00, which of these books could I then buy?

-  \$5.99
-  \$6.99
-  \$9.45
-  \$12.45



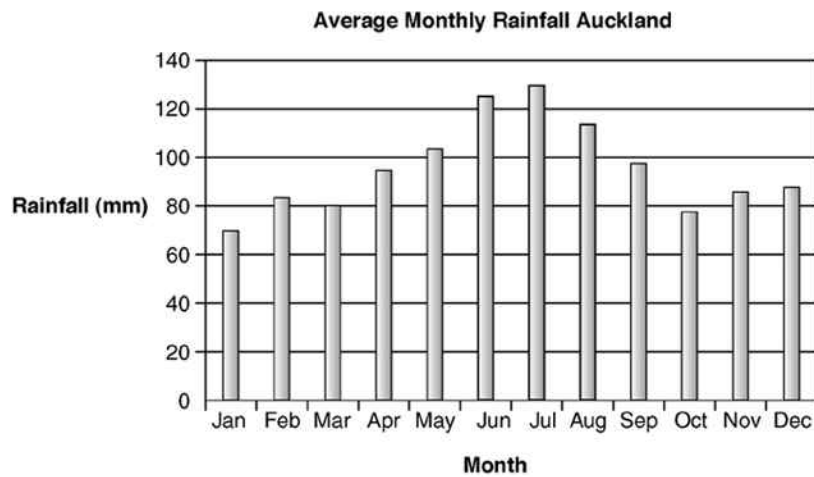
03. The tally chart below shows the number of cherries each Sue, Liz and Joe ate. Which student's graph matches the tally marks in the chart?

Cherries Eaten	
Sue	
Liz	
Joe	



Use the following information to answer questions 04 to 05.

The graph shows the average monthly rainfall in Auckland. The months of June, July and August make up the winter season.



**04.** Which month had the greatest amount of rainfall?

\_\_\_\_\_

**05.** How many millimetres of rain fell during January?

\_\_\_\_\_ mm

End of Section

**06.** Which digit is in the **hundreds of thousands** place in the number 6 750 123?

- 0
- 1
- 5
- 7

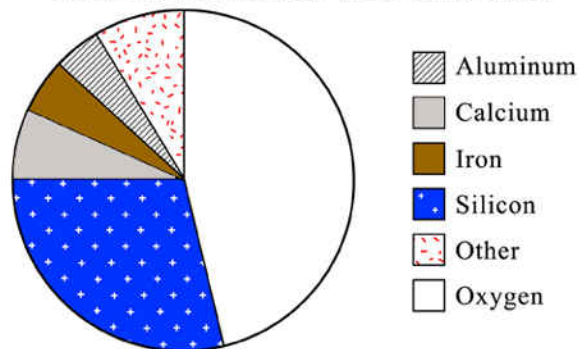
07. Which two **odd** numbers have been left out of this number chart?

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

- 15, 26
- 26, 21
- 33, 15
- 15, 21

08. 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

09. Which of the following has the greatest value?

- 12.1
- 0.97
- 4.23
- 5.08

10. Pat has 3 fish bowls. There are 4 plants and 5 fish in each bowl. Which gives the total number of fish?

- $3 + 5$
- $3 \times 4$
- $3 \times 5$
- $3 + 4 + 5$

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?



- A horizontal row of four rectangular blocks, each containing a digit. From left to right, the digits are 2, 5, 8, and 3.
- A horizontal row of four rectangular blocks, each containing a digit. From left to right, the digits are 2, 5, 3, and 8.
- A horizontal row of four rectangular blocks, each containing a digit. From left to right, the digits are 2, 8, 5, and 3.
- A horizontal row of four rectangular blocks, each containing a digit. From left to right, the digits are 2, 3, 8, and 5.

12. Tasi washed 4 cars in the morning at a church car wash. In the afternoon he washed 3 times as many.

How many cars did he wash in the afternoon?

- 3
- 7
- 12
- 16

Use the following information to answer question 13.

The table below shows the number of visitors to Bent's Fort from March through September.

Visitors to Bent's Fort

Month	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.
Number of Visitors (rounded to nearest hundred)	1 600	3 200	4 100	4 300	6 100	3 300	2 400

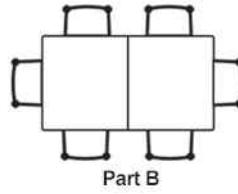
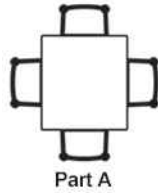
13. According to the months shown, what were the three **MOST** popular months to visit Bent's Fort?

- 1) \_\_\_\_\_
- 2) \_\_\_\_\_
- 3) \_\_\_\_\_

End of Section

14. Thomas is setting up tables for a banquet. He knows that four people can sit around the table in Part A. When he puts two of these tables together, he can seat six people (Part B).

How many people can Thomas seat if he puts three tables together?



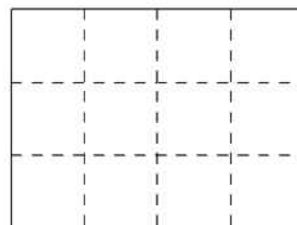
- 6
- 8
- 10
- 12

15. A store sells 168 tapes each week.  
How many tapes does it sell in 24 weeks?

- 7
- 192
- 4032
- 4172

Use the following information to answer questions 16 to 18.

At a party, a cake was cut into pieces.



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

\_\_\_\_\_

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

\_\_\_\_\_

18. Ben ate 4 pieces of cake.

What fraction of the cake is left?

\_\_\_\_\_

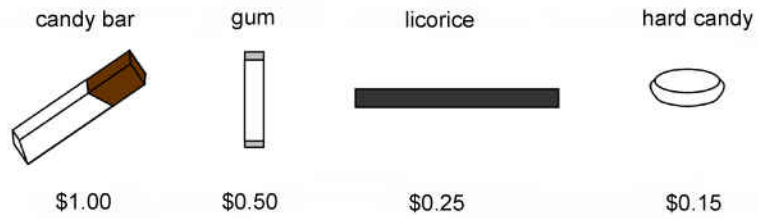
End of Section

19.  $(150 \div 3) + (6 \times 2) =$

- 10
- 58
- 62
- 112

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**20.** The picture below shows the cost of some items at the candy store. Omar bought 1 candy bar, 1 pack of gum, and 1 piece of hard candy. What is the total amount of money Omar spent?



- \$1.50
- \$1.65
- \$1.75
- \$1.90

**21.** Mr Hall is providing orange slices for the 27 students in his class. Each student will receive 2 slices. He plans to cut each orange into 4 slices. How many oranges will Mr Hall need?

- 11
- 12
- 13
- 14

**22.** Mele needs to purchase 5 notebooks at \$1.99 each and 3 pens at \$0.89 each.

About how much will she spend?

- \$15.00
- \$13.00
- \$11.00
- \$9.00



23. Where should the decimal point be in the answer?

$$\begin{array}{r} 31.7 \\ \times 2.3 \\ \hline 7291 \end{array}$$

          K          L          M

- K
- L
- M

24. Which one of the following is the same as  $\frac{1}{4}$  of 20?

- $\frac{1}{5}$  of 30
- $\frac{1}{3}$  of 18
- $\frac{1}{5}$  of 25
- $\frac{1}{10}$  of 90

25. Which of these is another way to write the product  $12 \times 7$ ?

- $2 \times 3 \times 7$
- $3 \times 4 \times 7$
- $3 \times 6 \times 7$
- $6 \times 6 \times 7$

26. 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?

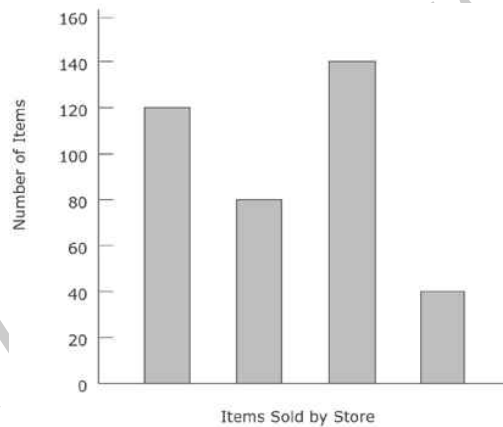
27. The graph shows the number of pens, pencils, rulers, and erasers sold by a store in one week.

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.

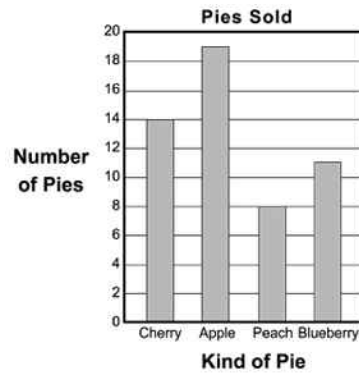
More pencils than rulers were sold.

How many pencils were sold?



- 40
- 80
- 120
- 140

28. 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

29. Which number below has the **LEAST** value?

- 31.64
- 316.4
- 3.164
- 3164.0

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30. The table shows the cost of tickets to a museum. The cost per ticket does not change. Based on the pattern in the table, what will be the total cost of 3 tickets?

**Museum Tickets**

Number of Tickets	Total Cost
1	\$2.75
2	\$5.50
3	?
4	\$11.00
5	\$13.75


- \$7.25
- \$7.75
- \$8.25
- \$8.50

31. The pictogram below shows the number of T-shirts sold each day of School Spirit Week.

About how many **MORE** T-shirts were sold on Tuesday than on Friday?

**T-Shirts Sold**

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

 = 10 T-shirts

- 4
- 5
- 40
- 45

32. Feleti cleans houses and uses the rule below to work out how much to charge.

$$\text{Cost (\$)} = 20 \times (\text{number of hours worked}) + 10$$

He spent 3 hours cleaning a house.

How much should he charge?

- \$70
- \$60
- \$50
- \$30

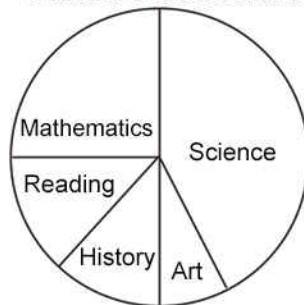
33.  $12.08 \times 1.7 =$

- 2 053.6
- 205.36
- 20.536
- 2.0536

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

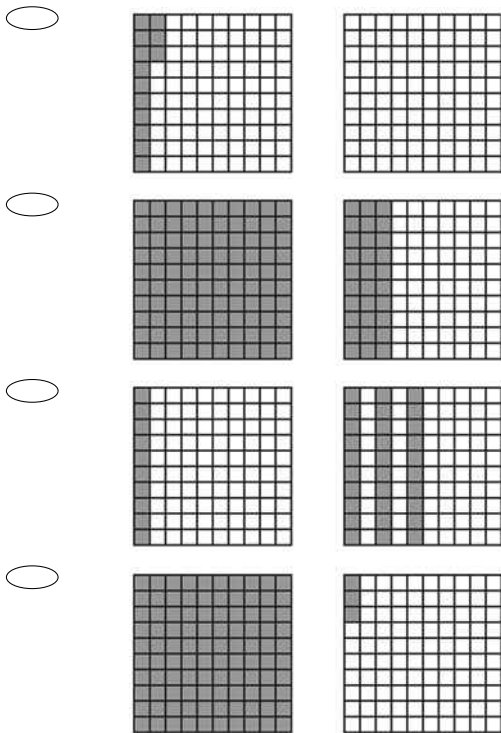
If Patrick spent 2 hours on Mathematics, about how many hours did he spend on homework altogether?

Patrick's Homework



- 4
- 8
- 12
- 16

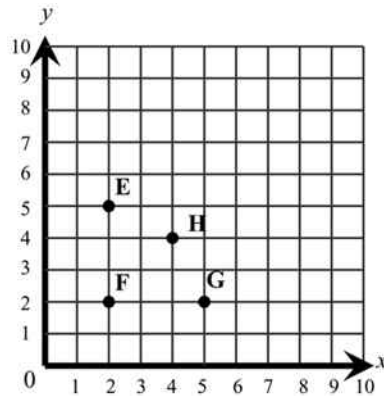
35. Which shows 1.03 shaded?



36. Trish's resting heart rate is 50 beats per minute. For every minute she exercises, her heart rate increases 5 beats per minute. How long will it take her to reach a heart rate of 120 beats per minute?

- 5 minutes
- 14 minutes
- 34 minutes
- 70 minutes

37. Which of the following appears to be at (5, 2) on the grid?



- E
- F
- G
- H

38. Kyle needs to buy brushes, nails, and paint to make bookshelves. He will sell the bookshelves for \$18 each.

What additional information does Kyle need to calculate the profit he will make from selling 10 bookshelves?

- The kind of wood
- The size of the nails and the colour of the paint
- The amount he will collect for selling 10 bookshelves
- His cost to make one bookshelf

Use the following information to answer question 39..

Adam found a recipe for chocolate biscuits. To cook some for his class, he tripled the recipe and wrote it out again.

Original Recipe

Chocolate Biscuits	
Flour	450 g
Baking Powder	2 teaspoons
Milk	250 mL
Chocolate Powder	1 teaspoon
Hot Water	250 mL
Eggs	3
Butter	425 g

Adam's Recipe

Chocolate Biscuits	
Flour	_____ g
Baking Powder	4 teaspoons
Milk	_____ mL
Chocolate Powder	3 teaspoons
Hot Water	750 mL
Eggs	9
Butter	_____ g

39. The original recipe makes between 20 - 25 biscuits.

Estimate how many biscuits Adam's recipe would make.

\_\_\_\_\_

End of Section

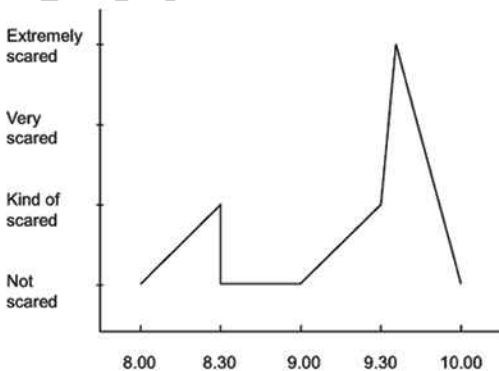
40. Complete the co-ordinates of the next point in the linear pattern

$(-2, 2) (-1, 4) (0, 6) (1, 8) (2, 10)$

$(\text{_____}, \text{_____})$

Use the following information to answer questions 41 to 43.

This graph shows how scared Dominic got when he went camping with his family.



Dominic said "When mum sent me into the tent at 8.00pm I got scared because it was dark and I was on my own. At 8.30pm mum came to tuck me in and read a story. I wasn't scared any more. Mum went back outside at 9:00pm. Then ..."

Using the graph, fill in the spaces to show what may have happened to Dominic and how he felt about it.



41.

Time	Event	Dominic's Feelings
9.00pm	_____	_____

42.

Time	Event	Dominic's Feelings
9.35pm	_____	_____

43.

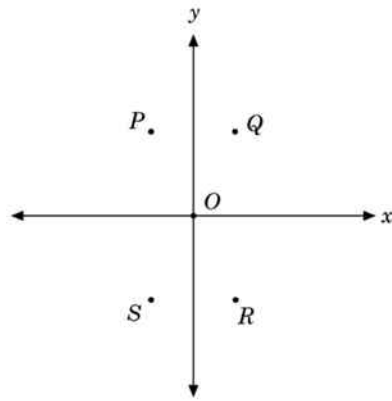
Time	Event	Dominic's Feelings
10.00pm	_____	_____

End of Section

44. A telephone company charges \$0.05 per minute for local calls and \$0.12 per minute for long-distance calls. Which expression gives the total cost in dollars for  $x$  minutes of local calls and  $y$  minutes of long-distance calls?

- $0.05x + 0.12y$
- $0.05x - 0.12y$
- $0.17(x + y)$
- $0.17xy$

45. In the coordinate plane below, which point could have coordinates (2,-4)?



- P
- Q
- R
- S

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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

- 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

#### Tablet (9"+)

- iPads: iOS10+ 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. 

#### 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.