

## Summary

### Test Identification

<b>Name</b>	2021 MAT SW 3.3
<b>Date Created</b>	16 Sep 2021
<b>Date Modified</b>	05 Nov 2021
<b>Subject</b>	Mathematics
<b>Status</b>	ACCEPTED
<b>Sequence Number</b>	1164865
<b>Total Test Time</b>	59 minutes
<b>Delivery Method</b>	Onscreen

### Curriculum Strand

<b>Number Sense &amp; Operations</b>	16	<b>Number Knowledge</b>	11
<b>Statistics</b>	10	<b>Algebra</b>	10

### Curriculum Level

<b>2B</b>	4	<b>2P</b>	3	<b>2A</b>	1
<b>3B</b>	3	<b>3P</b>	14	<b>3A</b>	15
<b>4B</b>	3	<b>4P</b>	4	<b>4A</b>	0

### Cognitive Processing

<b>Surface</b>	28	<b>Deep</b>	19
----------------	----	-------------	----

### 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 : 2021 MAT SW 3.3

Q.No	Marking Key
1	d
2	Gate 1
3	Gate 3
4	b
5	b
6	c
7	c
8	27.5
9	c
10	a
11	c
12	d
13	c
14	a
15	60, 75
16	Add 15 'Any equivalent answer for 1 mark.'
17	a
18	c
19	b
20	c
21	a
22	c
23	b
24	a
25	a
26	d
27	c
28	d
29	a
30	d
31	c
32	a

---

### 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
<b>33</b>	a
<b>34</b>	c
<b>35</b>	c
<b>36</b>	a
<b>37</b>	Auckland, Wellington, Christchurch, Hamilton, Dunedin 'Must be in order stated in Answer Key.'
<b>38</b>	b
<b>39</b>	d
<b>40</b>	6 hours
<b>41</b>	3:00 pm (accept from say 2:30pm), because it is at this time that the shellfish are at their closest to the water surface; you would not get as wet when collecting them. '1 mark for explanation fitting the time 3.00 pm only. No mark if only time given.'
<b>42</b>	3:00 am
<b>43</b>	1429
<b>44</b>	6500
<b>45</b>	19 545
<b>46</b>	b
<b>47</b>	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 (-).

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
---------------------	----------------	--------------	-------------------

**01.** I like maths at school.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------

**02.** I am good at maths.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------

**03.** My teacher thinks I am good at maths.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------

**04.** My family/whānau think I am good at maths.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------

**05.** I enjoy doing maths in my own time (not at school).

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------

**06.** I enjoy doing things in maths that I haven't tried before.

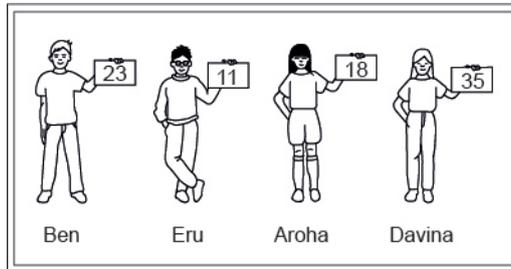
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------

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?

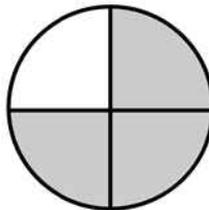


- Ben
- Eru
- Aroha
- Davina

**P02.** Complete this number pattern.

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

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



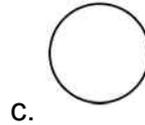
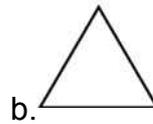
\_\_\_\_\_



**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.

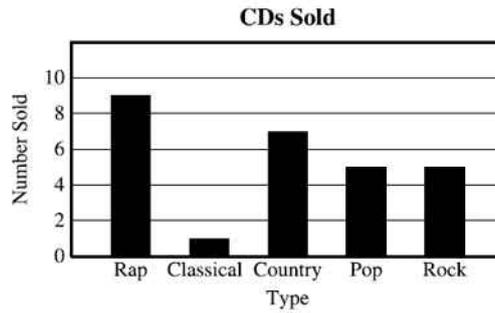
**TRUE**

**FALSE**

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

ADMINISTER ON SCREEN  
ONLY

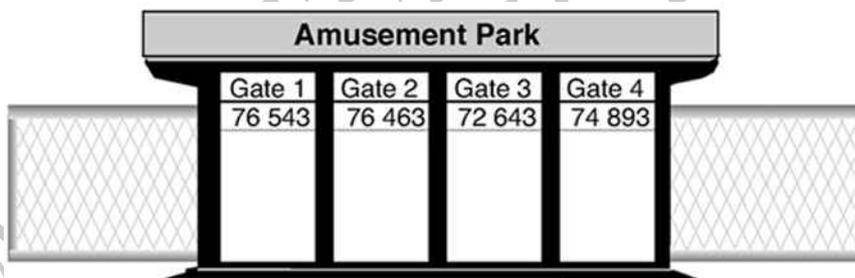
01. This graph shows the CD sales for one day. Look at the CDs that sold the most. How many were sold?



- 5
- 7
- 8
- 9

Use the following information to answer questions 02 to 03.

These are the gateways to an amusement park. Each gate shows the number of people who have visited during one year.



02. Which gate did **MOST** people use?

---

03. Which gate did the **LEAST** number of people use?

---

End of Section

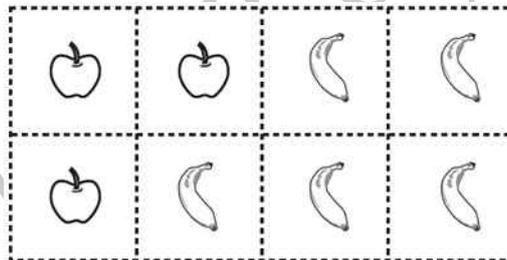
04. Which means seven hundred thousand five hundred ninety-two?

- 70 592
- 700 592
- 705 920
- 7 005 920

05. Which set of numbers is in order from greatest to least?

- 147, 163, 234, 275
- 275, 234, 163, 147
- 275, 163, 234, 147
- 163, 275, 234, 147

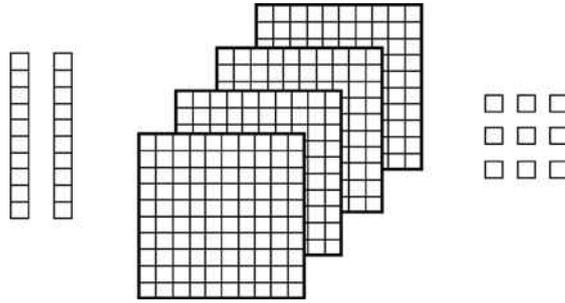
06. What fraction of the group of stickers is apple stickers?



- 
- 
- 
- 

3  
5  
3  
2  
8  
8

**07.** Each small square (cube) below is equal to 1. There are 10 small squares in each strip. There are 100 small squares in each large square. What number is shown?



- 4029
- 492
- 429
- 249

**08.** Tama spent \$12.50 and had \$15 left.

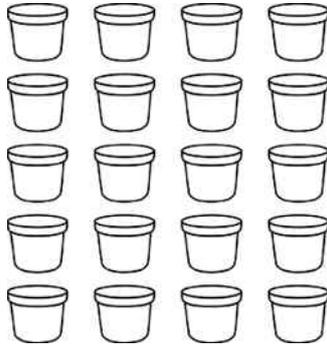
How much did he start with?

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

**09.** Kere has read the first 78 pages in a book that has 130 pages. Which number sentence would Kere use to find the number of pages she must read to finish the book?  
(N = number of pages to be read)

- $130 + 78 = N$
- $N - 78 = 130$
- $130 - 78 = N$
- $130 \div 78 = N$

10. The picture shows the flowerpots in which Kevin will plant flower seeds. He needs 3 seeds for each pot. Which of the following number sentences shows how many seeds Kevin will need for all of the pots?

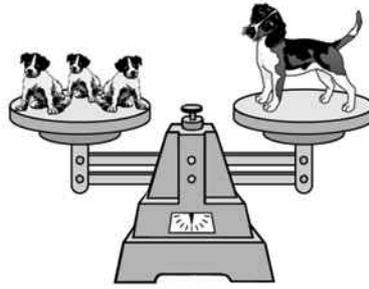


- $5 \times 4 \times 3 =$
- $(5 \times 4) + 3 =$
- $(5 + 4) \times 3 =$
- $5 + 4 + 3 =$

11. Which drawing shows three times five?

- 
- 
- 
-

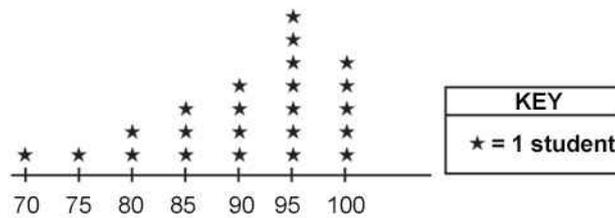
12. A mother dog and her three puppies weigh a total of 32 kilograms. The mother dog's weight equals the weight of the three puppies together. What is the weight of the mother dog?



- 4 kilograms
- 8 kilograms
- 12 kilograms
- 16 kilograms

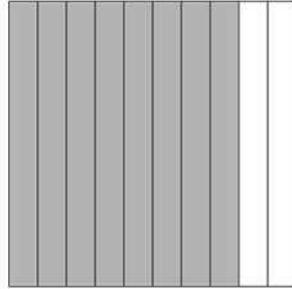
13. The line plot below shows how students scored on last week's vocabulary test. How many students scored 95 or higher on the test?

Vocabulary Test Scores



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

14. The figure below is shaded to represent a decimal.  
Which of the following groups is shaded to represent a fraction with the same value as the decimal represented below?



- 
- 
- 
- 

Use the following information to answer questions 15 to 16.

30, 45, \_\_, \_\_, 90

15. Complete this number pattern.

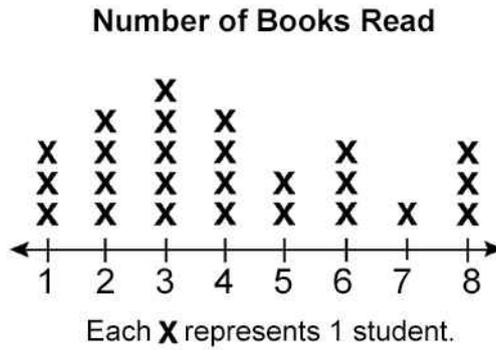
30, 45, \_\_\_\_\_, \_\_\_\_\_, 90

16. What is the rule for this pattern?

---

End of Section

17. 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

18. The total length of a vehicle is 205.83 units.  
What is the length of the vehicle rounded to the nearest whole number?

- 200 units
- 205 units
- 206 units
- 210 units

19. By how much would 217 be increased if the digit 1 were replaced by a digit 5?

- 4
- 40
- 44
- 400

20. The total cost for Patsy to attend 9 days of arts and crafts camp was \$306. The cost for each day of camp is the same.

What was the cost for each day of arts and crafts camp?



- \$27
- \$31
- \$34
- \$42

21. The table below shows the number of tickets sold to different events at the county fair. What was the total number of tickets sold for these four events?

**Event Tickets Sold**

Event	Number Sold
Dog Show	2260
Craft Booth	3031
Whirly Ride	928
Ferris Wheel	1415

- 7634
- 7624
- 6634
- 6524

**22.** Bill is 42 inches tall. Tom is twice as tall as Bill.  
How tall are the two boys together?

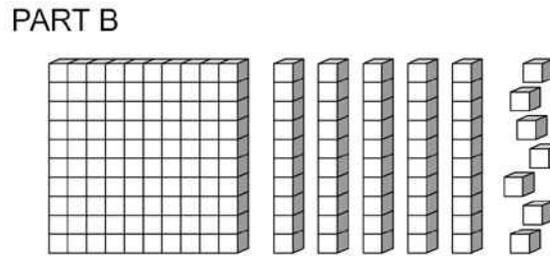
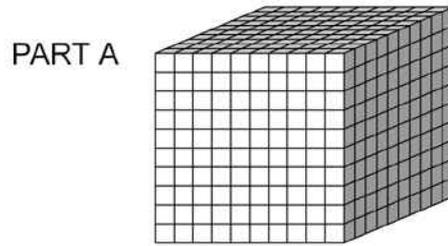
- 72 inches
- 84 inches
- 126 inches
- 168 inches

**23.** Which of the following statements is **TRUE**?

- $83\,521 > 85\,432$
- $85\,383 > 85\,338$
- $53\,785 > 53\,875$
- $54\,736 > 57\,463$

ADMINISTER ON SCREEN  
ONLY

24. Part A represents the number 1.  
What number is represented by Part B?

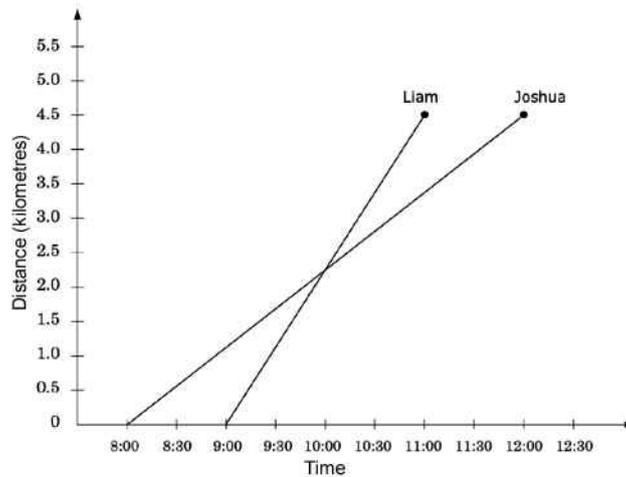


- 0.157
- 0.175
- 0.517
- 0.571

25. Kirstin wants to buy a flute that costs \$240. She has saved \$20 each week for 3 weeks.  
How many **more** weeks does Kirstin need to save if she continues to save \$20 each week?

- 9 weeks
- 10 weeks
- 11 weeks
- 12 weeks

26. 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

27. Each time Rosa takes her dog for a check-up, Dr Azim records the dog's weight. Which of the following is the **BEST** way for the doctor to record the dog's weight at each check-up in order to see any changes in the weight?

- Pictogram
- Tally chart
- Line graph
- Circle graph

28. Marta used a rule to combine the numbers in column A and column B to get the number in column C.

Which of the following was **MOST** likely the rule Marta used?

A	B	→	C
14	2	→	7
20	4	→	5
36	4	→	9
24	3	→	8
19	3	→	

- Add the number in column A to the number next to it in column B.
- Subtract the number in column B from the number next to it in column A.
- Multiply the number in column A times the number next to it in column B.
- Divide the number in column A by the number next to it in column B.

29. Bridgett's mother recorded Bridgett's height on each birthday.

Which is the **BEST** way for Bridgett to show this information?

- Line graph
- Tally chart
- Bar graph
- Circle graph

30. Just before sunrise the temperature was 13 degrees below zero. By 10 am the temperature had risen 19 degrees.

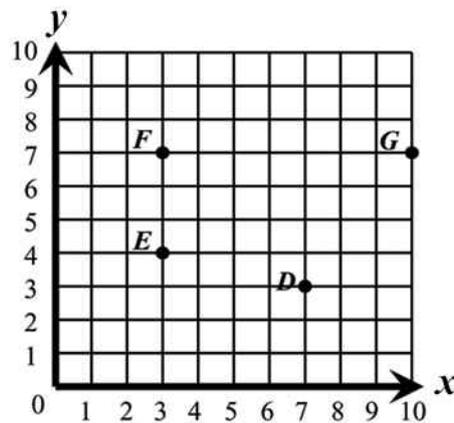
Which shows how to find the temperature at 10 am?

- $13 - 19$
- $13 + 19$
- $-13 - 19$
- $-13 + 19$

31. Sharice scored the following numbers of points in 5 dart games.  
88, 96, 112, 135, 144  
What is the median of these numbers?

- 56
- 88
- 112
- 115

32. Which coordinates appear to be the location point G on the coordinate grid?



- (10, 7)
- (7, 10)
- (7, 3)
- (3, 7)

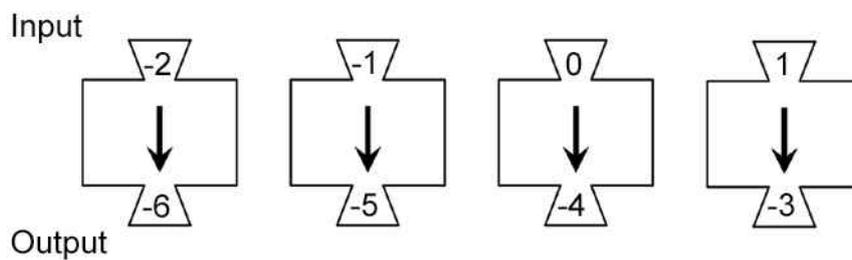
33. The Smiths are planning to drive the 1038 kilometres from their home to the Grand Canyon. They plan to drive 689 kilometres the first day.  
How many kilometres will they have left to drive to reach the Grand Canyon?

- 349
- 368
- 451
- 527

34. Last week Drew worked 7.9 hours. This week he worked 8.6 hours. How many more hours did he work this week than last week?

- 1.7
- 1.3
- 0.7
- 0.3

35. Which of these could be the rule for the input/output machine shown below?



- Input times 3 equals output.
- Input plus 4 equals output.
- Input plus -4 equals output.
- Input divided by 3 equals output.

36. What is the value of the expression below if  $a = 3$ ?  
 $15 - (a + 8)$

- 4
- 12
- 20
- 26

Use the following information to answer questions 37 to 38.

The table shows the number of people living in New Zealand's main urban regions in 1996.

REGION	POPULATION
Auckland	991 797
Christchurch	325 251
Dunedin	110 802
Hamilton	158 046
Hastings	58 494
Napier	52 953
Palmerston North	73 860
Rotorua	54 297
Tauranga	82 287
Wellington	334 050

**37.** List the top five regions in order of population from largest to smallest.

Largest \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

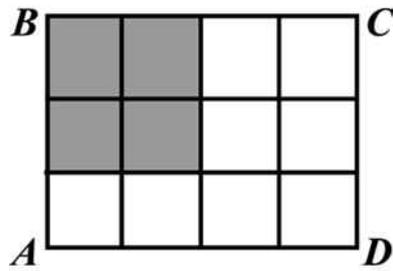
Smallest \_\_\_\_\_

**38.** The total population in the three smallest regions is closest to which one of these figures?

- 107 000
- 166 000
- 471 000
- 1 651 000

End of Section

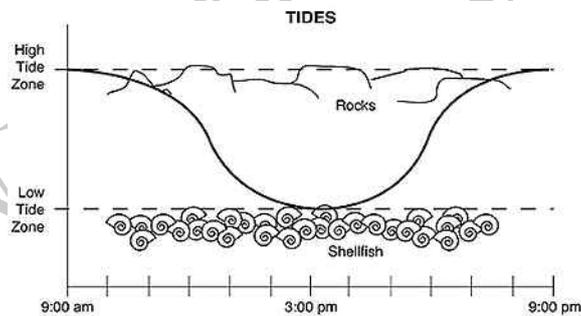
39. In the figure below, what fraction of rectangle  $ABCD$  is shaded?



- $\frac{1}{6}$
- $\frac{1}{5}$
- $\frac{1}{4}$
- $\frac{1}{3}$
- $\frac{1}{2}$

Use the following information to answer questions 40 to 42.

Some students made a graph to show the tides at the local beach for one day.



40. Using the graph, approximately how many hours are there from high tide to low tide?

\_\_\_\_\_

41. Decide the **BEST** time to collect shellfish that day and explain your answer.

\_\_\_\_\_

\_\_\_\_\_

42. Approximately, what time would the next low tide be?

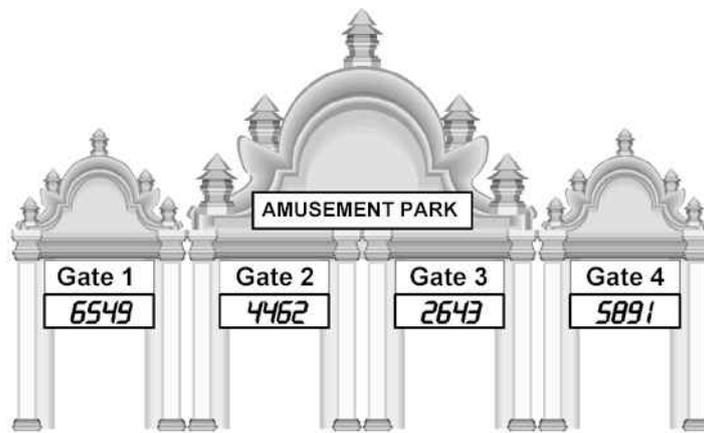
\_\_\_\_\_

End of Section

**Use the following information to answer questions 43 to 45.**

These are the gateways to an amusement park.

Each gate shows the number of people who visited during one week.



43. What is the difference between the totals of Gates 2 and 4?

\_\_\_\_\_

44. Round the Gate 1 total to the nearest 100.

\_\_\_\_\_

45. What is the total crowd attendance?

\_\_\_\_\_

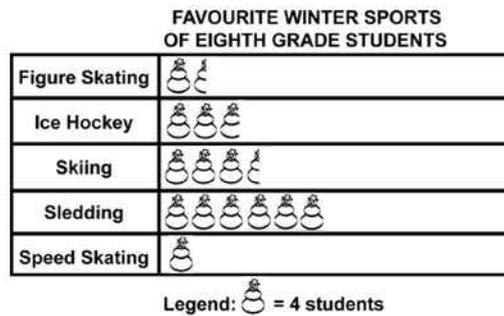
End of Section

46. Jackie collected 3 less than twice the number of cans Chad collected for recycling.

If  $c$  represents the number of cans Chad collected, what is an expression for the number of cans collected by Jackie?

- $3 + 2 \times c$
- $2 \times c - 3$
- $c + 2 \times c - 3$
- $c + c + 2 \times c$

47. According to the graph below, about how many students chose skiing as their favourite winter sport?



- $3\frac{1}{2}$
- 4
- $12\frac{1}{2}$
- 14
- 16

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

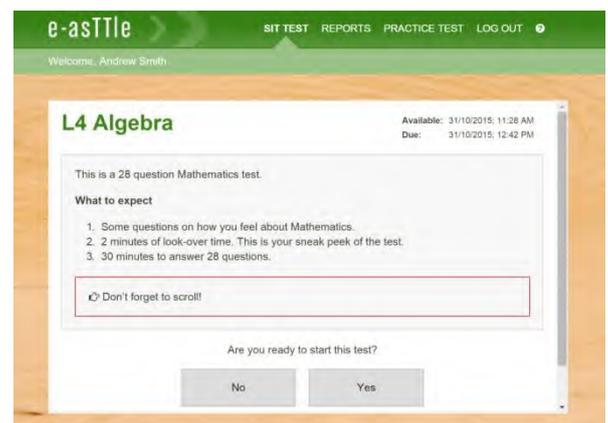
### 1. Check equipment

- 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.