Sierra Leone

WINNING TEAMS: Mathematics

Questions for teams

Primary 6 (Term 3) to support JSS1 Term 3

Leh Wi Lan

Theme: Algebra Number Patterns (M-06-046) **CODE CC1**	Theme: Algebra Number Patterns (M-06-048) **CODE CC5**
Lesson Title: Increasing Numbers with a Common Difference	Lesson Title: Decreasing Number Patterns with a Common Difference
Consider the following sequence: 2, 4, 6, 8, ____, ____ . a) What is the common difference of the sequence? b) Determine the next two terms of the sequence. 2 minutes	Consider the sequence below: 38, 32, 26, 20, … a) What is the common difference of the sequence? b) Determine the next three terms of the sequence. 2 minutes
Theme: Algebra Number Patterns (M-06-046) **CODE CC2**	Theme: Algebra Number Patterns (M-06-048) **CODE CC6**
Lesson Title: Increasing Numbers with a Common Difference	Lesson Title: Decreasing Number Patterns with a Common Difference
Consider the sequence below: 1, 4, 7, 10, ____, ____ . a) Determine the next two terms of the sequence. b) Use the common difference and a table to work out the rule for this sequence. 2 minutes	Complete the sequence by subtracting a common difference. 40, 33, 26, 19, ____, ____ . 2 minutes
Theme: Algebra Number Patterns (M-06-047) **CODE CC3**	Theme: Algebra Number Patterns (M-06-049) **CODE CC7**
Lesson Title: Increasing Number Patterns Without a Common Difference	Lesson Title: Decreasing Patterns Without a Common Difference
Complete the sequence by finding the next two terms: 1, 3, 6, 10, _____, _____ . 2 minutes	Find the next two terms of the sequence. 53, 52, 49, 44, ____, _____. Does the sequence have a common difference or a common ratio? 2 minutes

Theme: Algebra Number Patterns (M-06-047) **CODE CC4**

Lesson Title: Increasing Number Patterns Without a Common Difference

Complete the sequence by finding the next 2 terms:

6, 8, 12, 20, _____, _____ .

2 minutes

Theme: Algebra Number Patterns (M-06-050) **CODE CC8**

Lesson Title: Multiplication in Patterns with a Common Ratio

Consider the sequence below:

1, 3, 9, 27, _____, _____.

What is the common ratio of the sequence?

2 minutes

Theme: Algebra Number Patterns (M-06-46) **CODE CC9**

Lesson Title: Multiplication in Patterns with a Common Ratio

a) Complete the table for this sequence:

4, 7, 10, 13, ____, ____

n	1	2	3	4
Term x_n	4	7	10	13
Use 3n	3			
Wrong by:				

b) Find the rule for the sequence.

2 minutes

Theme: Algebra Number Patterns (M-06-46) **CODE CC13**

Lesson Title: Division in Number Patterns with a Common Factor

a. Complete the table for this sequence:
16, 13, 10, 7, ____, ____

n	1	2	3	4	5
Term x_n	5	9	13	17	21
Use 4n					
Wrong by:					

b. Find the rule for the sequence.

$2\frac{1}{2}$ minutes

Theme: Algebra Number Patterns (M-06-046) **CODE CC10**

Lesson Title: Multiplication in Number Patterns Without a Common Ratio

a) Complete the table for this sequence:

2, 5, 8, 11, ____, _____.

n	1	2	3	4
Term x_n				
3n				
Wrong by:				

b) Find the rule for the sequence.

2 minutes

Theme: Algebra Number Patterns (M-06-054) **CODE CC14**

Lesson Title: Writing Sequences with Multiples of 2 and 3

The Wholesome Bakery baked 2 loaves of bread on Monday, 4 loaves of bread on Tuesday, 8 loaves of bread on Wednesday, and 16 loaves of bread on Thursday.

If this pattern continues, how many loaves of bread will they bake on Friday?

2 minutes

Theme: Algebra Number Patterns (M-06-051) **CODE CC11**

Lesson Title: Multiplication in Number Patterns Without a Common Ratio

Determine the common ratio for the sequence below:

2, 4, 8, 16, 32.

1 minute

Theme: Algebra Number Patterns (M-06-054) **CODE CC15**

Lesson Title: Writing Sequences with Multiples of 2 and 3

Mary is sharing cherries among some bowls. She puts 3 cherries in the first bowl, 9 cherries in the second bowl, 27 cherries in the third bowl, 81 cherries in the fourth bowl.

If this pattern continues, how many cherries will Mary put in the fifth bowl?

2 minutes

Theme: Algebra Number Patterns (M-06-052) **CODE CC12**	Theme: Algebra Number Patterns (M-06-055) **CODE CC16**
Lesson Title: Division in Number Patterns with a Common Factor	Lesson Title: Writing Sequences with Multiples of 4 and 5
Find the next term in the sequence below and determine the common ratio. 64, 32, 16, 8, _____. 2 minutes	Kimberly reads 21 pages on Monday, 26 pages on Tuesday, 31 pages on Wednesday, 36 pages on Thursday. If this pattern continues, how many pages will Kimberly read on Friday? 2 minutes
Theme: Algebra Number Patterns (M-06-055) **CODE CC17**	Theme:Statistics and Probability Data Handling(M-06-064) **CODE CC21**
Lesson Title: Writing Sequences with Multiples of 4 and 5	Lesson title: The Mean, Median, and Mode of Discrete Data
Nina and her friends went on a road trip. They covered 4 miles on the first day. They went on a 16-mile drive on day 2 and a 64-mile drive on day 3. How many miles did Nina and her friends drive on the 4^{th} day? 2 minutes	The number of members in twenty math clubs are given below: 4, 6, 5, 5, 4, 6, 3, 3, 5, 5, 3, 5, 4, 4, 6, 7, 3, 5, 5, 7 a) Arrange the data in order from smallest to biggest. b) What is the minimum value of the data set? c) What is the maximum value of the data set? 2 minutes
Theme:Statistics and Probability Data Handling(M-06-064) **CODE CC18**	Theme:Statistics and Probability Data Handling(M-06-064) **CODE CC22**
Lesson title: The Mean, Median, and Mode of Discrete Data	Lesson title: The Mean, Median, and Mode of Discrete Data
Fill in the blank: The _____ is the value that appears the most frequently in a data set. 30 seconds	The weekly wages (Le) of 12 factory workers are given below: 668, 610, 642, 658, 668, 620, 719, 720, 700, 690, 710, 642. a) Find the median for the data. b) Find the mode for the data. $1\frac{1}{2}$ minutes
Theme:Statistics and Probability Data Handling(M-06-064) **CODE CC19**	Theme:Statistics and Probability Data Handling(M-06-064) **CODE CC23**
Lesson title: The Mean, Median, and Mode of Discrete Data	Lesson title: The Mean, Median, and Mode of Discrete Data
Fill in the blank: The _____ is the value in the middle of the ordered data set. 30 seconds	Given below are the maximum temperatures for the first week of the month of September. 19° 20° 24° 25° 25° 28° 25° Find the median, the mode and the mean for the data. $2\frac{1}{2}$ minutes

Theme:Statistics and Probability Data Handling(M-06-064) **CODE CC20**

Lesson title: The Mean, Median, and Mode of Discrete Data

Fill in the blank:

The _____ is found by adding all the numbers in the data set and then dividing by the number of values in the set.

30 seconds

Theme:Statistics and Probability Data Handling(M-06-064) **CODE CC24**

Lesson title: The Mean, Median, and Mode of Discrete Data

Find the median of 7, –4, 9, –7, –2, 5.

1 minute

Theme:Statistics and Probability Data Handling(M-06-064) **CODE CC25**

Lesson title: The Mean, Median, and Mode of Discrete Data

Find the mean of the following numbers:

6, 2, –7, 2, –5, 11, 3, –4, 0, 9

1 minute

Theme: Statistics & Probability; Data Handling (M-06-0121) **CODE CC29**

Lesson Title: Representing Discrete Data

Fill in the blank:

A _____ is a graphical representation of how continuous data is distributed.

1 minute

Theme: Statistics & Probability; Data Handling (M-06-0121) **CODE CC26**

Lesson Title: Representing Discrete Data

Fill in the blanks:

a) _____ are graphs that represent quantities with vertical bars with spaces between them.

b) _____ are graphs that use pictures to represent a set of data.

2 minutes

Theme: Statistics & Probability; Data Handling (M-06-0122) **CODE CC30**

Lesson Title: Representing Continuous Data

Use the data provided to draw a h**istogram** showing the number of trees of each height in centimetres

height (cm)	Trees
100 – 149 cm	5
150 – 199 cm	30
200 – 249 cm	26
250 – 299 cm	50
300 – 349 cm	11

3 minutes

Theme: Statistics & Probability; Data Handling (M-06-0121) **CODE CC27**

Lesson Title: Representing Discrete Data

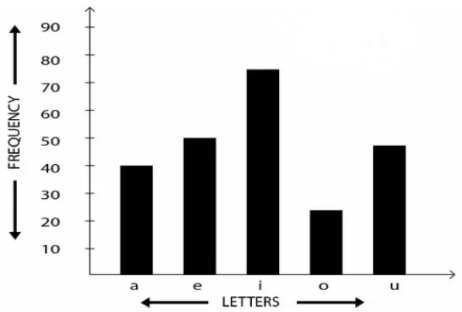
The table shows how many countries in each continent buy oil from Ukraine. Draw a **Bar Chart** to represent the information.

Continent	Countries
Europe	16
North America	6
Asia	3
Australia	2
South America	1

2 minutes

Theme: Statistics & Probability; Data Handling (M-06-0123) **CODE CC31**

Lesson Title: Lesson Title: Interpreting Bar Charts



Fatima records the number of vowels in 10 pages of a textbook. Which letter appears the most?

1 minute

Theme: Statistics & Probability; Data Handling (M-06-0121) **CODE CC28**

Lesson Title: Representing Discrete Data

Use the following table to draw a **Pictograph**

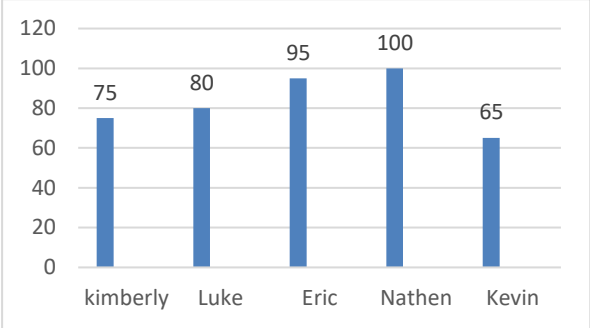
Modes of transport	Number of children
Bus	28
Car	16
Walking	24
Bicycle	12

Use the Key: ☺ represents 4 children

$2\frac{1}{2}$ minutes

Theme: Statistics & Probability; Data Handling (M-06-0123) **CODE CC32**

Lesson Title: Lesson Title: Interpreting Bar Charts

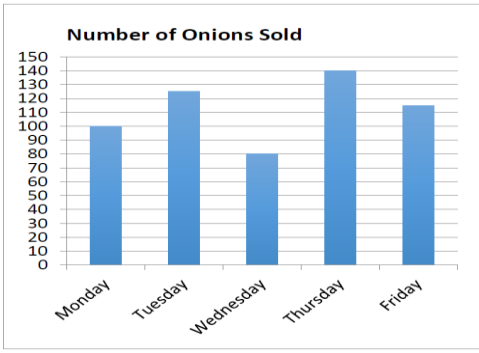


The graph shows the Mathematics marks for 5 children. What is the mean of the data?

1 minute

Theme: Statistics & Probability; Data Handling (M-06-0123) **CODE CC33**

Lesson Title: Lesson Title: Interpreting Bar Charts

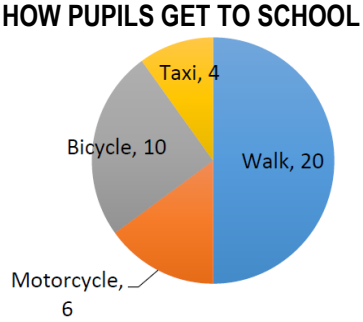


Which day were the most onions sold and how many onions were sold on that day?

30 seconds

Theme: Statistics & Probability; Data Handling (M-06-0125) **CODE CC37**

Lesson Title: Interpreting Data from Pie Charts



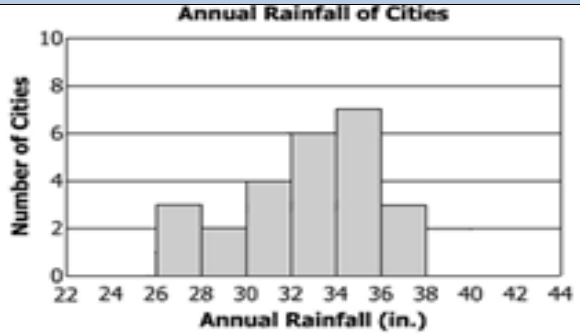
a. How many pupils are represented in the data?

b. What percentage of the pupils walk to school?

2 minutes

Theme: Statistics & Probability; Data Handling (M-06-0124) **CODE CC34**

Lesson Title: Interpreting Histograms

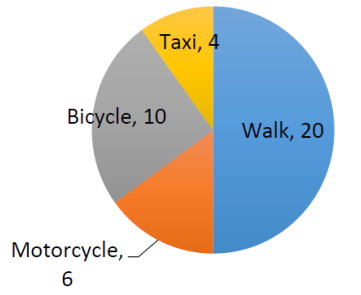


What does the horizontal x-axis of this histogram represent?

30 seconds

Theme: Statistics & Probability; Data Handling (M-06-0125) **CODE CC38**

Lesson Title: Interpreting Data from Pie Charts

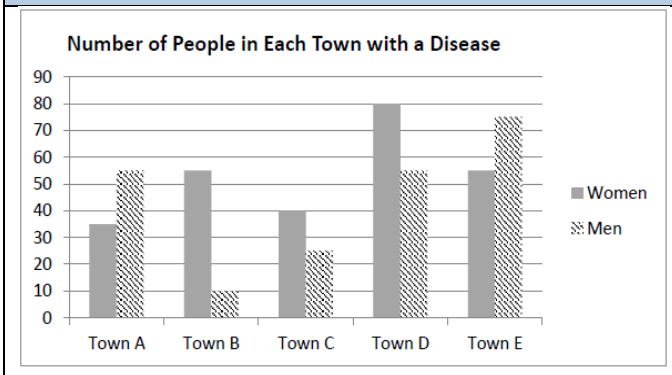


Which method do 25% of the pupils use to go to school?

2 minutes

Theme: Statistics & Probability; Data Handling (M-06-0124) **CODE CC35**

Lesson Title: Interpreting Histograms

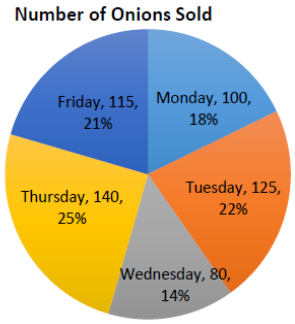


Which town has the biggest difference in the number of diseases in men and women?

30 seconds

Theme: Statistics & Probability; Data Handling (M-06-0125) **CODE CC39**

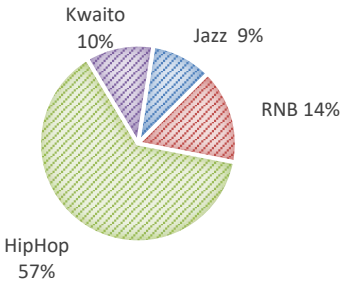
Lesson Title: Interpreting Data from Pie Charts



What fraction of the total number of onions sold was sold on Monday?

1 minute

Theme: Statistics & Probability; Data Handling (M-06-0125) **CODE CC36**	Theme: Statistics & Probability; Data Handling (M-06-0126) **CODE CC40**
Lesson Title: Interpreting Data from Pie Charts	Lesson Title: Word Problems Involving Pie Charts
Fill in the blank: A _____ is a chart that uses pie slices or segments to show the relative sizes of data. 1 minute	The table gives information about the meals ordered on a Sunday at a restaurant. **Meal** / **Frequency** Beef: 9 Chicken: 14 Pork: 57 Sushi: 10 a. How many meals were ordered altogether? b. Which meal is the most popular at this restaurant? 1 minute

Theme: Statistics & Probability; Data Handling (M-06-0126) **CODE CC41**	Theme Statistics and Probability; Data Handling (M-06-0128) **CODE CC44**
Lesson Title: Word Problems Involving Pie Charts	Lesson Title: Median of Discrete Data
One hundred and fifty people were asked about their favourite music genre and the following were the results obtained.  How many people like RNB music? $1\frac{1}{2}$ minutes	Work out the median for each set of numbers below: a) $7, 3, 8, 9, 6, 5$ b) $124, 53, 39, 230, 155, 180$ 2 minutes
Theme Statistics and Probability; Data Handling (M-06-0127) CODE CC42	**Theme Statistics and Probability; Data Handling (M-06-0128) CODE CC45**
Lesson Title: Mode of Discrete Data	Lesson Title: Median of Discrete Data
Consider the discrete data below: $12,\ 24,\ 6,\ 4,\ 6,\ 5,\ 6,\ 17,\ 20$ a) Rearrange the data in order from least to greatest. b) What is the **mode** of the data? $1\frac{1}{2}$ minutes	A netball team plays 11 matches. The number of points they score in each match are: $20, 30, 24, 32, 22, 68, 67, 58, 55, 49, 17$ a) Work out the **median** number of points scored. b) How many of the total points scored are higher than the median? 2 minutes
Theme Statistics and Probability; Data Handling (M-06-0127) CODE CC43	**Theme Statistics and Probability; Data Handling (M-06-0128) CODE CC46**
Lesson Title: Mode of Discrete Data	Lesson Title: Median of Discrete Data
Given the data below, identify the mode in each set: a) 3, 7, 5, 13, 20, 23, 39, 23, 40, 23, 14, 12, 56, 23, 29. b) 60, 55, 59, 56, 61, 62, 62, 62, 57, 61. 2 minutes	A sequence of five numbers is arranged in ascending order, starting with 32. Which of the following could be the set of numbers if the median is 35? A. $32, 34, 35, 36, 40$ B. $32, 35, 40, 44, 48$ C. $32, 35, 36, 38, 49$ D. $32, 33, 34, 35, 53$ 1 minute

Theme Statistics & Probability; Data Handling (M-06-0129) **CODECC47**	Theme Statistics &Probability; Data Handling (M-06-0130) **CODE CC49**
Lesson Title: Mean of Discrete Data	Lesson Title: Appropriate Average
Find the mean for each of the sets of data below: a) 1, 8, 7, 5, 6, 4, 7, 6 b) $3, 2, 1, 3, 2, 2, 1, 3, 1, 2, 3, 2, 1$ 2 minutes	The mass in kg of 10 students are given below: $39, 43, 36, 38, 46, 51, 33, 44, 44, 43$ Find the mode, median and mean of this data. $2\frac{1}{2}$ minutes

Theme Statistics & Probability; Data Handling (M-06-0129) **CODE CC48**	Theme Statistics & Probability; Data Handling (M-06-0130) **CODE CC50**
Lesson Title: Mean of Discrete Data	Lesson Title: Appropriate Average
According to Laurica's math teacher, the final class grade is calculated using the average of all tests results. Laurica's math test scores are 93%, 87%, 71%, and 97%.. a) What central tendency measure will she use when calculating the average? (mean, median or mode?) b) Determine Laurica's final class average. 2 minutes	Consider the discrete data below: $31, 16, 54, 13, 93, 41, 41, 95$ a) Determine the mean, median and mode of this data. b) Determine the most appropriate average of this data if we know that the data is a set of ages of people in a large family. $2\frac{1}{2}$ minutes