Sierra Leone

WINNING TEAMS: Mathematics

Questions and Answers for Referees

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-06-046) **CODE CC1**
Lesson Title: Increasing Numbers with a Common Difference	Lesson Title: Increasing Numbers 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	Answer: a) The common difference is 2. b) The next two terms are: 　8 + 2 = 10 　10 + 2 =12 **Sequence**: 2, 4, 6, 8, **10, 12**

Theme: Algebra Number Patterns (M-06-046) **CODE CC2**	Theme: Algebra Number Patterns (M-06-046) **CODE CC2**
Lesson Title: Increasing Numbers with a Common Difference	Lesson Title: Increasing Numbers 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	Answer: a) **Sequence**: 1, 4, 7, 10, **13, 16**

a)

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

The rule is 3n – 2

Theme: Algebra Number Patterns (M-06-047) **CODE CC3**	Theme: Algebra Number Patterns (M-06-047) **CODE CC3**
Lesson Title: Increasing Number Patterns Without a Common	Lesson Title: Increasing Number Patterns Without a Common
Complete the sequence by finding the next two terms: 　　1, 3, 6, 10, _____, _____ . 2 minutes	Answer The next two terms are **15** and **21**

Theme: Algebra Number Patterns (M-06-047) **CODE CC4**	Theme: Algebra Number Patterns (M-06-047) **CODE CC4**
Lesson Title: Increasing Number Patterns Without a Common	Lesson Title: Increasing Number Patterns Without a Common
Complete the sequence by finding the next 2 terms: 　　6, 8, 12, 20, _____, _____ . 2 minutes	Answer: 　The next two terms are **18 and 26**

Theme: Algebra Number Patterns (M-06-048) **CODE CC5**	Theme: Algebra Number Patterns (M-06-048) **CODE CC5**
Lesson Title: Decreasing Number Patterns with a Common	Lesson Title: Decreasing Number Patterns with a Common
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	Answer: a) Common difference is: -6 b) The next three terms are: 14, 8 and 2.
Theme: Algebra Number Patterns (M-06-048) **CODE CC6**	Theme: Algebra Number Patterns (M-06-048) **CODE CC6**
Lesson Title: Decreasing Number Patterns with a Common	Lesson Title: Decreasing Number Patterns with a Common
Complete the sequence by subtracting a common difference. 40, 33, 26, 19, ____, ____ . 2 minutes	Answer: Common difference is: $-$**7** **Hence:** 40, 33, 26, 19, **12, 5.**
Theme: Algebra Number Patterns (M-06-049) **CODE CC7**	Theme: Algebra Number Patterns (M-06-049) **CODE CC7**
Lesson Title: Decreasing Patterns Without a Common Difference	Lesson Title: Decreasing Patterns Without a Common Difference
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	Answer: The next two terms are **37** and **28** The difference between terms is –1, then –3, then –5, then –7, then –9. There is no common difference or common ratio.
Theme: Algebra Number Patterns (M-06-050) **CODE CC8**	Theme: Algebra Number Patterns (M-06-050) **CODE CC8**
Lesson Title: Multiplication in Patterns with a Common Ratio	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	Answer: $1 \times 3 = 3$ $3 \times 3 = 9$ $9 \times 3 = 27$ $27 \times 3 = 81$ $81 \times 3 = 243$ The common ratio is 1 **: 3**

Theme: Algebra Number Patterns (M-06-046) **CODE CC9**	Theme: Algebra Number Patterns (M-06-046) **CODE CC9**
Lesson Title: Multiplication in Patterns with a Common Ratio	Lesson Title: Multiplication in Patterns with a Common Ratio

Left card (CC9):

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

Right card (CC9):

Answer:

n	1	2	3	4
Term x_n	**4**	**7**	**10**	**13**
Use 3n	3	2 x 3 = 6	3 x 3 = 9	4 x 3 = 12
Wrong by:	+1	+1	+1	+1

The rule is 3n + 1

Theme: Algebra Number Patterns (M-06-046) **CODE CC10**	Theme: Algebra Number Patterns (M-06-046) **CODE CC10**
Lesson Title: Multiplication in Number Patterns Without a Common	Lesson Title: Multiplication in Number Patterns Without a Common

Left card (CC10):

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.

Right card (CC10):

Answer:

n	1	2	3	4
Term x_n	**2**	**5**	**8**	**11**
3n	3	2 x 3	3 x 3	4 x 3
Wrong by:	−1	−1	−1	−1

The rule is 3n – 1

Theme: Algebra Number Patterns (M-06-051) **CODE CC11**	Theme: Algebra Number Patterns (M-06-051) **CODE CC11**
Lesson Title: Multiplication in Number Patterns Without a Common	Lesson Title: Multiplication in Number Patterns Without a Common

Left card (CC11):

Determine the common ratio for the sequence below:

2, 4, 8, 16, 32.

1 minute

Right card (CC11):

Answer:

2 is the common ratio because we multiply by 2 each time to find the next term.

Theme: Algebra Number Patterns (M-06-052) **CODE CC12**	Theme: Algebra Number Patterns (M-06-052) **CODE CC12**
Lesson Title: Division in Number Patterns with a Common Factor	Lesson Title: Division in Number Patterns with a Common Factor

Left card (CC12):

Find the next term in the sequence below and determine the common ratio.

64, 32, 16, 8, _____.

2 minutes

Right card (CC12):

Answer:

64, 32, 16, 8, **4**

64 ÷ 2 = 32 or we can say 64 x ½ = 32

32 ÷ 2 = 16

16 ÷ 2 = 8

8 ÷ 4 = 2

Common ratio of ½

Theme: Algebra Number Patterns (M-06-052) **CODE CC13**	Theme: Algebra Number Patterns (M-06-052) **CODE CC13**
Lesson Title: Division in Number Patterns with a Common Factor	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

Answer:

n	1	2	3	4	5
Term x_n	**5**	**9**	**13**	**17**	**21**
Use 4n	4	8	12	16	20
Wrong by:	−1	−1	−1	−1	−1

The rule is 4n – 1

Theme: Algebra Number Patterns (M-06-054) **CODE CC14**	Theme: Algebra Number Patterns (M-06-054) **CODE CC14**
Lesson Title: Writing Sequences with Multiples of 2 and 3	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

Answer:

The sequence is $2, 4, 8, 16, 32$

Multiply by 2 to get the next term.

They will bake 32 loaves of bread on Friday.

Theme: Algebra Number Patterns (M-06-054) **CODE CC15**	Theme: Algebra Number Patterns (M-06-054) **CODE CC15**
Lesson Title: Writing Sequences with Multiples of 2 and 3	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

Answer:

The sequence : $3, 9, 27, 81, \_\_\_$

Multiply by 3 to get the next term.

Mary will put 243 cherries in the fifth bowl.

Theme: Algebra Number Patterns (M-06-055) **CODE CC16**	Theme: Algebra Number Patterns (M-06-055) **CODE CC16**
Lesson Title: Writing Sequences with Multiples of 4 and 5	Lesson Title Writing Sequences with Multiples of 4 and 5

 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

Answer:

Sequence: 21, 26, 31, 36, ____
Add 5 each time, so Kimberly will read 41 pages on Friday.

Theme: Algebra Number Patterns (M-06-055) **CODE CC17**	Theme: Algebra Number Patterns (M-06-055) **CODE CC17**
Lesson Title: Writing Sequences with Multiples of 4 and 5	Lesson Title Writing Sequences with Multiples of 4 and 5
Nina and her friends went on a road trip. They covered 4 miles on the first day. They went on a 16-mile drive and a 64 -mile drive on day 2 and day 3. How many miles did Nina and her friends drive on the 4th day? 2 minutes	Answer: **Sequence**: 4, 16, 64, ___ Multiply by 4 to get the next term. 64 x 4 = 256 Nina and her friends covered 256 miles on the 4th day.
Theme:Statistics and Probability Data Handling(M-06-064) **CODE CC18**	Theme:Statistics and Probability Data Handling(M-06-064) **CODE CC18**
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	Answer: The **mode** is the value that appears the most frequently in a data set.
Theme:Statistics and Probability Data Handling(M-06-064) **CODE CC19**	Theme:Statistics and Probability Data Handling(M-06-064) **CODE CC19**
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 data set. 30 seconds	Answer: The **median** is the value in the middle of the data set.
Theme:Statistics and Probability Data Handling(M-06-064) **CODE CC20**	Theme:Statistics and Probability Data Handling(M-06-064) **CODE CC20**
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 found by adding all numbers in the data set and then dividing by the number of values in the set. 30 seconds	Answer: The **mean** is found by adding all numbers in the data set and then dividing by the number of values in the set.

Theme:Statistics and Probability Data Handling(M-06-064) **CODE CC21**	Theme:Statistics and Probability Data Handling(M-06-064)
Lesson title: The Mean, Median, and Mode of Discrete Data	Lesson title: The Mean, Median, and Mode of Discrete Data
The number of members in 20 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 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	Answer: a) 3, 3, 3, 3, 4, 4, 4, 4, 5, 5, 5, 5, 5, 5, 6, 6, 6, 7, 7 b) The minimum value is: 3 c) The maximum value is: 7

Theme:Statistics and Probability Data Handling(M-06-064) **CODE CC22**	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
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	Answer: Smallest to largest: 610, 620, 642, 642, 658, 668, 668, 690, 700, 710, 719, 720. a) Median: $\frac{668+668}{2} = 668$ b) Mode: 642 and 668 (bimodal)

Theme:Statistics and Probability Data Handling(M-06-064) **CODE CC23**	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
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	Answer: Smallest to largest: 19°, 20°, 24°, 25°, 25° , 25° ,28° Median: 25° Mode: 25° Mean: $\frac{19°+ 20°+ 24°+ 25°+ 25°+ 25°+28°}{7} \approx 23.71°$

Theme:Statistics and Probability Data Handling(M-06-064) **CODE CC24**	Theme:Statistics and Probability Data Handling(M-06-064) **CODE CC24**
Lesson title: The Mean, Median, and Mode of Discrete Data	Lesson title: The Mean, Median, and Mode of Discrete Data
Find the median of 7, –4, 9, –7, –2, 5. 1 minute	Answer: Smallest to largest: –7, –4, –2, 5, 7, 9 Median: $\frac{-2+5}{2} = \frac{3}{2} = 1.5$

Theme:Statistics and Probability Data Handling(M-06-064) **CODE CC25**	Theme:Statistics and Probability Data Handling(M-06-064) **CODE CC25**
Lesson title: The Mean, Median, and Mode of Discrete Data	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

Answer:

$$\text{Mean} = \frac{6+2+(-7)+2+(-5)+11+3+(-4)+0+9}{10} = \frac{17}{10} = 1.7$$

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

Fill in the blanks:

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

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

1 minute

Answer:

a) **Bar charts** are graphs that represent quantity with vertical bars having spaces between them.

b) **Pictograms** are graphs that use pictures to represent a certain set of data.

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

Answer:

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

Answer:

Modes of transport	Number of children
Bus	😊 😊 😊 😊 😊 😊 😊
Car	😊 😊 😊 😊
Walking	😊 😊 😊 😊 😊 😊
Bicycle	😊 😊 😊

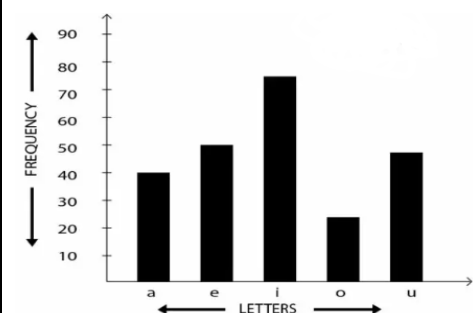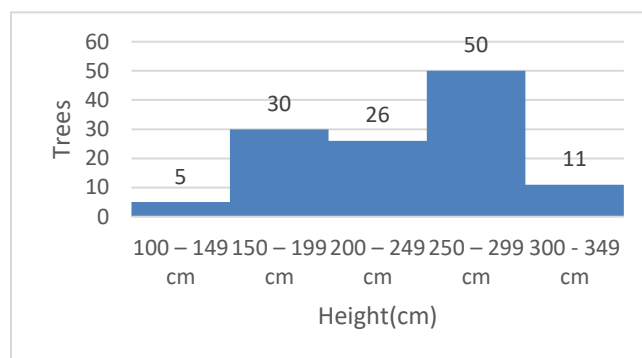| Theme: Statistics & Probability; Data Handling (M-06-0121) **CODE CC29**	Theme: Statistics & Probability; Data Handling (M-06-0121) **CODE CC29**
Lesson Title: Representing Discrete Data	Lesson Title: Representing Discrete Data
Fill in the blank: A _____ is a graphical representation of how continuous data is distributed. 1 minute	Answer: A **histogram** is a graphical representation of how continuous data is distributed.

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

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

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

3 minutes

Answer:

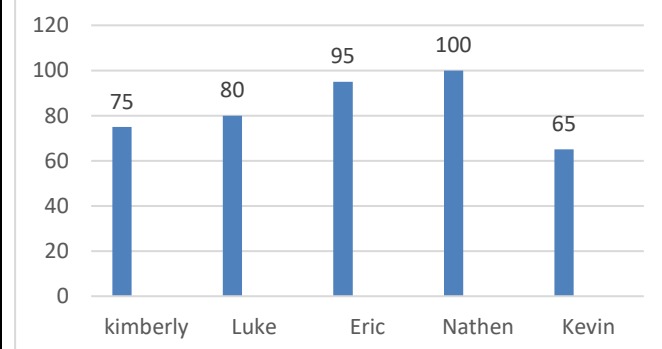| Theme: Statistics & Probability; Data Handling (M-06-0123) **CODE CC31**	Theme: Statistics & Probability; Data Handling (M-06-0123) **CODE CC31**
Lesson Title: Lesson Title: Interpreting Bar Charts	Lesson Title: Lesson Title: Interpreting Bar Charts

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

1 minute

Answer:

The letter **i** appeared the most.

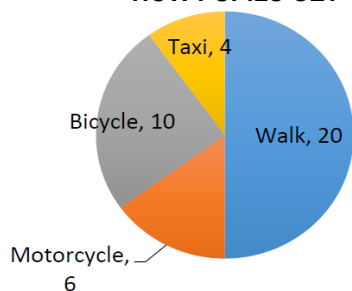| Theme: Statistics & Probability; Data Handling (M-06-0123) **CODE CC32**	Theme: Statistics & Probability; Data Handling (M-06-0123) **CODE CC32**
Lesson Title: Lesson Title: Interpreting Bar Charts	Lesson Title: Lesson Title: Interpreting Bar Charts

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

1 minute

Answer:

$$\text{Mean} = \frac{75+80+95+100+65}{5} = \mathbf{83}$$

Theme: Statistics & Probability; Data Handling (M-06-0123) **CODE CC33**	Theme: Statistics & Probability; Data Handling (M-06-0123) **CODE CC33**
Lesson Title: Lesson Title: Interpreting Bar Charts	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	Answer: On Thursday, when 140 onions were sold.
Theme: Statistics & Probability; Data Handling (M-06-0124) **CODE CC34**	Theme: Statistics & Probability; Data Handling (M-06-0124) **CODE CC34**
Lesson Title: Interpreting Histograms	Lesson Title: Interpreting Histograms
What does the x-axis of this histogram represent?　　30 seconds	Answer: The annual rainfall in inches.
Theme: Statistics & Probability; Data Handling (M-06-0124) **CODE CC35**	Theme: Statistics & Probability; Data Handling (M-06-0124) **CODE CC35**
Lesson Title: Interpreting Histograms	Lesson Title: Interpreting Histograms
Which town has the biggest difference in the number of diseases in men and women?　　30 seconds	Answer: Town B (55 – 10 = 45)
Theme: Statistics & Probability; Data Handling (M-06-0125) **CODE CC36**	Theme: Statistics & Probability; Data Handling (M-06-0125) **CODE CC36**
Lesson Title: Interpreting Data from Pie Charts	Lesson Title: Interpreting Data from Pie Charts
Fill in the blank: A _____ is a special chart that uses pie slices or segments to show the relative sizes of data.　　1 minute	Answer: A **pie chart** is a special chart that uses pie slices or segments to show relative sizes of data.

| Lesson Title: Interpreting Data from Pie Charts | Lesson Title: Interpreting Data from Pie Charts |

HOW PUPILS GET TO SCHOOL

Taxi, 4 | Bicycle, 10 | Walk, 20 | Motorcycle, 6

a. How many pupils are represented in the data?
b. What percentage of the pupils walk to school?

2 minutes

Answer:

a. Total number of pupils$= 10 + 6 + 4 + 20 = \textbf{40}$

b. percentage$= \dfrac{\text{Number of pupils walking to school}}{\text{Total number of pupils}} \times 100$

$$= \frac{20}{40} \times 100$$
$$= 50\%$$

50% of the pupils walk to school.

| Lesson Title: Interpreting Data from Pie Charts | Lesson Title: Interpreting Data from Pie Charts |

HOW PUPILS GET TO SCHOOL

Taxi, 4 | Bicycle, 10 | Walk, 20 | Motorcycle, 6
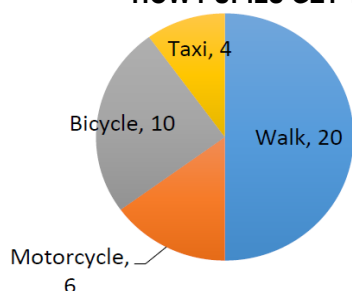
Which method do 25% of the pupils use to go to school?

2 minutes

Answer:

25% of the circle = ¼ of 40
$= 25\% \times 40$
$= 10$

Therefore: 25% of the learners use bicycles to get to school.

| Lesson Title: Interpreting Data from Pie Charts | Lesson Title: Interpreting Data from Pie Charts |

Number of Onions Sold

Friday, 115, 21% | Monday, 100, 18% | Thursday, 140, 25% | Tuesday, 125, 22% | Wednesday, 80, 14%
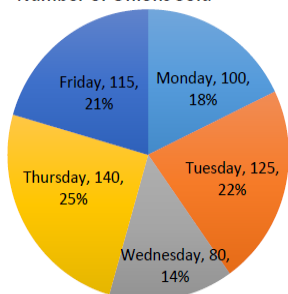
What fraction of the total number of onions sold was sold on Monday?

1 minute

Answer:

Fraction of onions sold on a Monday $= 18\%$

$$= \frac{18}{100} = \frac{18 \div 2}{100 \div 2}$$

$$= \frac{\textbf{9}}{\textbf{50}}$$

| Lesson Title: Word Problems Involving Pie Charts | Lesson Title: Word Problems Involving Pie Charts |

The table gives information about the meals ordered on a Sunday at a restaurant.
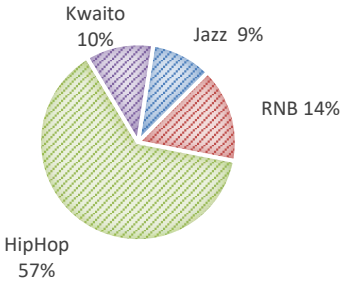
Meal	Frequency
Beef	9
Chicken	14
Pork	57
Sushi	10

a. How many meals were ordered altogether?
b. Which meal is the most popular at this restaurant

1 minute

Answer:

a. 90 meals

b. Pork is most popular.

Theme: Statistics & Probability; Data Handling (M-06-0126) **CODE CC41**	Theme: Statistics & Probability; Data Handling (M-06-0126) **CODE CC41**
Lesson Title: Word Problems Involving Pie Charts	Lesson Title: Word Problems Involving Pie Charts
One hundred and fifty people were asked about their favourite music genre and the following were the results obtained. Kwaito 10% Jazz 9% RNB 14% HipHop 57% How many people like RNB music? $1\frac{1}{2}$ minutes	Answer: $$RNB = \frac{14}{100} \times 150 = 21$$ 21 people like RNB music
Theme Statistics and Probability; Data Handling (M-06-0127) **CODE CC42**	Theme Statistics and Probability; Data Handling (M-06-0127) **CODE CC42**
Lesson Title: Mode of Discrete Data	Lesson Title: Mode 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	Answer: a) $4, 5, 6, 6, 6, 12, 17, 20, 24$ b) The mode is 6, since it appears the most times in the set.
Theme Statistics and Probability; Data Handling (M-06-0127) **CODE CC43**	Theme Statistics and Probability; Data Handling (M-06-0127) **CODE CC43**
Lesson Title: Mode of Discrete Data	Lesson Title: Mode 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	Answer: a) $3, 5, 7, 12, 13, 14, 20, 23, 23, 23, 23, 29, 39, 40, 56.$ **The mode is 23.** b) $55, 56, 57, 59, 60, 61, 61, 62, 62, 62$ **The mode is 62.**
Theme Statistics and Probability; Data Handling (M-06-0128) **CODE CC44**	Theme Statistics and Probability; Data Handling (M-06-0128) **CODE CC44**
Lesson Title: Median of Discrete Data	Lesson Title: Median of Discrete Data
Work out the median for each of the following: a) $7, 3, 8, 9, 6, 5$ b) $124, 53, 39, 230, 155, 180$ 2 minutes	Answer: a) Least to Greatest: $3, 5, 6, 7, 8, 9$ Median $= \frac{6+7}{2} = \mathbf{6.5}$ b) Least to Greatest: $39, 53, 124, 155, 180, 230$ Median $= \frac{124+155}{2} = 139.5$

Lesson Title: Median of Discrete Data

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

Answer:

a) Least to Greatest:

$$17, 20, 22, 24, 30, \mathbf{32}, 49, 55, 58, 67, 689$$

Median $= \mathbf{32}$

b) Five of the total points scored are greater than the median.

Theme Statistics and Probability; Data Handling (M-06-0128) **CODE CC46**

Lesson Title: Median of Discrete Data

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

Answer:

Set A has a median of 35.

Theme Statistics and Probability; Data Handling (M-06-0129) **CODE CC47** | Theme Statistics and Probability; Data Handling (M-06-0128) **CODE CC47**

Lesson Title: Mean of Discrete Data

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

Answer:

a) $\frac{1+8+7+5+6+4+7+6}{8} = 5.5$

b) $\frac{3+2+1+3+2+2+1+3+1+2+3+2+1}{13} = 2$

Theme Statistics and Probability; Data Handling (M-06-0129) **CODE CC48** | Theme Statistics and Probability; Data Handling (M-06-0128) **CODE CC48**

Lesson Title: Mean of Discrete Data

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

Answer:

a) Laurica will use the mean to calculate the average

b) mean $= \frac{93+87+71+97}{4} = 87$

Laurica has a grade average of 87%

Lesson Title: Appropriate Average	Lesson Title: Appropriate Average
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	Answer: Order the data: $33, 36, 38, 39, \mathbf{43}, \mathbf{43}, 44, 44, 46, 51$ Mode $=$ 43 and 44 Median $= 43$ Mean $= \frac{33+36+38+39+43+43+44+44+46+51}{10} = 41{,}7$

Lesson Title: Appropriate Average	Lesson Title: Appropriate Average
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	a) Mean $= 48$; Median $= 41$; Mode $= 41$ b) The most appropriate average is the mean.