
Handling Data

TEACHING TASK

CONCEPTUAL UNDERSTANDING QUESTIONS (CUQ's)

Multiple Choice Questions

1. B) Time series data
Explanation: The graph shows how the student's test scores changed over a period of time, which is an example of time series data.

2. D) Bar graph
Explanation: A bar graph is ideal for showing comparisons between different categories (like time spent on different activities during recess).

3. B) 30°C
Explanation: If the temperature rises by 5°C each day starting at 20°C on Monday, the temperature on Thursday (4 days later) would be 20°C + 5°C × 4 = 40°C.

4. B) 20%
Explanation: The total is 100%. If 50% read fiction and 30% read non-fiction, the remaining 20% must read comics.

5. B) Recording the number of books a class reads
Explanation: Tally marks are useful for counting and keeping track of simple data such as the number of books a class reads.

ADVANCED LEVEL

More than One Answer Type

6. A) It shows parts of a whole.
B) It is easy to compare different categories at a glance.
Explanation: Circle graphs are excellent for showing the percentage of parts within a whole and allow for easy visual comparisons. However, they are not ideal for continuous data or a large number of categories.

7. B) In groups of five, with the fifth line drawn diagonally.
Explanation: Tally marks are typically grouped in sets of five, where the fifth mark is drawn diagonally to form a group.

8. A) Line graphs are used to show changes over time.
C) Data points are connected with lines to show trends.
Explanation: Line graphs are best used to show trends or changes over time by connecting data points. The x-axis typically represents time, not categories, and line

graphs are less useful for comparing categories.

Fill In the Blanks
9. symbols
Explanation: The key (legend) on a map explains the meaning of the symbols, colors, and lines used on the map.

10. top
Explanation: On most maps, North (N) is usually located at the top of the map.

11. directions
Explanation: To follow directions on a map, you need to turn left, right, or go straight, based on the directions given.

Matching Type
1. A map scale of 1:100,000 means that 1 cm on the map equals how many centimeters in real life? ------- D. 600,000 cm
Explanation: A scale of 1:100,000 means that 1 cm on the map represents 100,000 cm in real life. For real-life measurements, you'd need to scale the units correctly.
2. The symbol for a bus station on a tourist map is usually shown as a? ------ E. A blue circle
Explanation: A blue circle often represents a bus station or other transportation facilities on tourist maps.
3. A map with a scale of 1:10,000 would show more or less detail than a map with a scale of 1:100,000? ------- F. More detail
Explanation: A scale of 1:10,000 is larger, meaning it will show more detail compared to a map with a smaller scale (1:100,000).
4. If a map has a scale of 1:50,000, and the distance between two cities on the map is 6 cm, what is the real-life distance between the cities in kilometers? -------- C. 3 km
Explanation: A scale of 1:50,000 means that 1 cm on the map represents 50,000 cm (or 0.5 km) in real life. So, 6 cm on the map represents 6 × 0.5 = 3 kilometers.
5. What do cardinal directions on a map indicate? -------- A. The directions (north, south, east, west) to help navigate
Explanation: Cardinal directions (N, S, E, W) help users navigate and understand orientation on the map.
6. If a map shows parks and gardens using green shading, what type of map information does this represent? -------- B. Key (or legend)
Explanation: The key (or legend) explains what symbols or colors on the map represent, such as green shading indicating parks and gardens.

Answer the Following Questions
13. What percentage of students like other hobbies?
Given percentages:
Swimming: 40%, Reading: 25%, Painting: 15%, Cycling: 10%
The total percentage is 40% + 25% + 15% + 10% = 90%.
So, the percentage of students who like other hobbies is: 100% - 90% = 10%.

14. How many students study for 5 or more hours?
7 students study for 5 hours: |||||
5 students study for 8 hours: |||||
6 students study for 10 hours: ||||||
Total: 7 + 5 + 6 = 18 students study for 5 or more hours.

15. What trend can be observed from the line graph that represents this data?
From the data:
January: 200 units, February: 220 units, March: 250 units, April: 230 units, May: 280 units.
Trend: The sales generally show an upward trend, with a slight dip in April, but they increased again in May.

LEARNERS TASK

CONCEPTUAL UNDERSTANDING QUESTIONS (CUQ's)

Multiple Choice Questions

1. C) It allows for easy comparison of parts of a whole
Explanation: A circle graph (pie chart) is ideal for showing how different parts make up a whole, making comparisons between categories easier.

2. A) 30%
Explanation: The graph shows 40% for soccer, 30% for books, and 30% for other activities. Therefore, the percentage of students who do "other activities" is 30%.

3. B) 9
Explanation: The tally marks are: ||| ||| ||. Each group of five is counted as one (||||), so there are 5 + 5 + 1 = 9 items.

4. A) ||||| ||||| |||
Explanation: To represent 13 items using tally marks, you need two sets of five tallies (||| |||) and one additional set of three tallies (|||).

5. C) A steady increase in temperature from Monday to Sunday
Explanation: The line graph would show a steady increase in temperature if Monday is 18°C and Sunday is 30°C, implying a gradual rise.

ADVANCED LEVEL

More than One Answer Type

6. A) Collect data and find the total for each category.
B) Calculate the percentage for each category.
D) Draw each section based on the calculated percentages.
Explanation: The steps for creating a circle graph include collecting data, calculating

percentages, and then drawing each section based on the percentages. Option C, dividing the circle into sections of equal size, is not necessary unless the categories are equally divided.

7. C) The number of books read by different friends.
D) The distribution of votes in a survey.
Explanation: Tally marks are useful for counting items such as the number of books read or the distribution of survey votes, but they are not suitable for representing continuous data like temperature changes.

8. C) Line graphs are good for displaying trends or patterns.
D) Line graphs can be used to compare multiple data sets.
Explanation: Line graphs are excellent for showing trends over time and can be used to compare multiple datasets by plotting different lines on the same graph.

Fill In the Blanks
9. 50,000 cm
Explanation: A map scale of 1:50,000 means that 1 cm on the map represents 50,000 cm in real life.

10. larger
Explanation: When you enlarge a map, the scale factor becomes larger, meaning each unit on the map represents a smaller real-world distance.

11. smaller
Explanation: When you reduce a map, the scale factor becomes smaller, meaning each unit on the map represents a larger real-world distance.

Matching Type
1. C. Less detail
Explanation: When you reduce a map, the scale factor becomes smaller, meaning the map shows less detail.
2. A. 1 meter
Explanation: A map scale of 1:500 means that 1 cm on the map represents 1 meter in real life.
3. B. 100 km
Explanation: If the map's bar scale shows 5 cm = 50 km, then for 10 cm, the real-life distance would be 100 km (2 × 50 km).
4. D. A walking path
Explanation: A dashed line on a map is commonly used to represent a walking path or trail.
5. F. A chart that explains symbols, colors, and lines on the map
Explanation: The purpose of a map key (or legend) is to explain what the symbols, colors, and lines represent on the map.
6. E. Famous landmarks
Explanation: A red star on a map is commonly used to represent famous landmarks, such as significant places or points of interest.

Answer the Following Questions

13. What percentage of people prefer bananas?
The survey has 200 people in total.
The number of people who prefer bananas is 50.
The percentage is: (50/200)×100=25%
So, 25% of people prefer bananas.

14. How many students were surveyed in total?
The tally marks represent:
3 students have 1 pet: |||
5 students have 2 pets: |||||
4 students have 3 pets: ||||
2 students have 4 pets: ||
1 student has 5 pets: |
Total = 3 + 5 + 4 + 2 + 1 = 15 students were surveyed.

15. What was the change in the number of visitors from Monday to Friday?
Monday had 50 visitors, and Friday had 80 visitors.
The change in visitors is: 80-50=30
So, there was an increase of 30 visitors from Monday to Friday.