Year 4 · Statistics: Sorting and Counting Data

Name: _____ Date: _____

Hi there! This sheet helps you learn about different kinds of data, words we can sort into groups, and numbers we count or measure. Grab a pencil and have fun!

Warm-up

1. Is the colour of a car (red, blue, white) something we sort into groups, or something we count? Write "sort into groups" or "count".

2. How many pets a family owns is counted. Write down three numbers that could be answers.

3. Kiri did 18 skips in the first try and 21 skips in the second try. How many skips altogether?

4. A ribbon is 47 cm long. Round it to the nearest 10 cm.

Practice

5. Tick which of these are counted (discrete) and which are measured (continuous): (a) number of goals in a netball game, (b) how tall you are, (c) number of students in a class.

6. At Avondale School, the favourite fruit of 5 students was: apple, banana, apple, kiwifruit, apple. Which fruit was most popular, and how many chose it?

7. Tama timed how long it took to run 100 m on three days: 24 seconds, 22 seconds, 25 seconds. What was his fastest time?

8. Mrs Patel's class counted skips in 30 seconds: Sina 34, Leo 29, Mere 41. How many more skips did Mere do than Leo?

9. A water bottle holds 748 mL. Round this to the nearest 100 mL.

10. Four friends measured their long jumps: 1.2 m, 1.5 m, 1.3 m, 1.5 m. What is the difference between the longest and shortest jump?

Challenge

11. The class recorded how many skips each person did in 30 seconds: 20, 25, 25, 30, 30, 30. What number of skips happened most often, and what is the total of all skips?

12. Ana ran 1000 m in 5 minutes and 40 seconds. Rewrite this time in seconds, then say whether it rounds to the nearest minute as 5 or 6 minutes.

Answer key (for parents and tutors)

1. Is the colour of a car (red, blue, white) something we sort into groups, or something we count? Write "sort into groups" or "count".
   Sort into groups. Car colour is a categorical variable, it names a group rather than giving a number.

2. How many pets a family owns is counted. Write down three numbers that could be answers.
   Any whole numbers work, for example 0, 2 and 4. The number of pets is a discrete numerical variable because we count it in whole numbers.

3. Kiri did 18 skips in the first try and 21 skips in the second try. How many skips altogether?
   18 + 21 = 39 skips altogether.

4. A ribbon is 47 cm long. Round it to the nearest 10 cm.
   47 is closer to 50 than to 40, so 47 cm rounds to 50 cm.

5. Tick which of these are counted (discrete) and which are measured (continuous): (a) number of goals in a netball game, (b) how tall you are, (c) number of students in a class.
   (a) counted, goals are whole numbers. (b) measured, height is measured with a ruler or tape. (c) counted, students are whole numbers.

6. At Avondale School, the favourite fruit of 5 students was: apple, banana, apple, kiwifruit, apple. Which fruit was most popular, and how many chose it?
   Apple was chosen 3 times, banana 1 time, kiwifruit 1 time. Apple was most popular with 3 students.

7. Tama timed how long it took to run 100 m on three days: 24 seconds, 22 seconds, 25 seconds. What was his fastest time?
   Compare 24, 22 and 25. The smallest number is fastest, so 22 seconds was his fastest time.

8. Mrs Patel's class counted skips in 30 seconds: Sina 34, Leo 29, Mere 41. How many more skips did Mere do than Leo?
   41 − 29 = 12. Mere did 12 more skips than Leo.

9. A water bottle holds 748 mL. Round this to the nearest 100 mL.
   748 is between 700 and 800. It is closer to 700 (748 − 700 = 48, and 800 − 748 = 52), so it rounds to 700 mL.

10. Four friends measured their long jumps: 1.2 m, 1.5 m, 1.3 m, 1.5 m. What is the difference between the longest and shortest jump?
    Longest jump = 1.5 m, shortest jump = 1.2 m. Difference = 1.5 − 1.2 = 0.3 m (30 cm).

11. The class recorded how many skips each person did in 30 seconds: 20, 25, 25, 30, 30, 30. What number of skips happened most often, and what is the total of all skips?
    The most common value (the mode) is 30, because it appears three times. Total = 20 + 25 + 25 + 30 + 30 + 30 = 160 skips.

12. Ana ran 1000 m in 5 minutes and 40 seconds. Rewrite this time in seconds, then say whether it rounds to the nearest minute as 5 or 6 minutes.
    5 minutes = 5 × 60 = 300 seconds. Add 40 seconds: 300 + 40 = 340 seconds. Since 40 seconds is more than 30 seconds (half a minute), the time rounds up to 6 minutes.