

Interpreting data graphs



Read values off bar graphs, histograms, pie charts, and pictograms to draw conclusions.

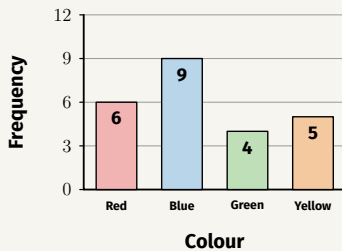
Name _____

Date _____

Show your method

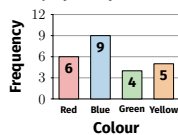
Read a value directly, or combine several values (add, subtract, find a fraction or percentage of the total) to answer the question. A bar graph has gaps between bars (discrete data); a histogram's bars touch (continuous data).

Worked example Read the bar graph. How many people chose Blue, and what is the total surveyed?



Blue = 9 (read directly).
Total = $6 + 9 + 4 + 5 = 24$

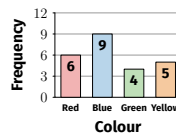
1. How many people chose Red?



Solution

6 (read directly)

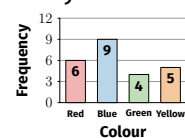
2. Which colour is the least popular?



Solution

Green (lowest, 4)

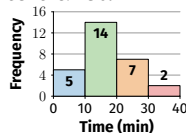
3. What is the total number of people surveyed?



Solution

$6 + 9 + 4 + 5 = 24$

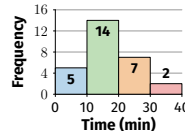
4. How many people take 20–30 minutes to travel?



Solution

7 (read directly)

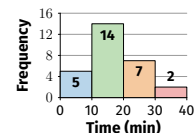
5. What is the modal class?



Solution

10-20 (highest, 14)

6. How many people take under 20 minutes (add the first two classes)?



Solution

$5 + 14 = 19$

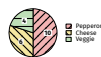
7. Which pizza topping is most popular?



Solution

Pepperoni (highest, 10)

8. What percentage prefer Veggie?



Solution

$2/10 = 20\%$

9. Explain the difference between a sample and a census.

Solution

A sample surveys part of a population; a census surveys every member of it.

Interpreting data graphs (continued)



Read a pictogram, then reason about samples, censuses, and display types.

Name _____

Date _____

10. Each icon = 5 ice creams. How many were sold on Tuesday?



Solution

$$7 \text{ icons} \times 5 = 35$$

11. Which day sold the fewest ice creams?



Solution

Wednesday (lowest, 15)

12. Estimate the total ice creams sold Mon–Thu.



Solution

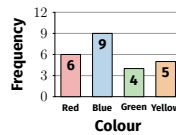
$$20 + 35 + 15 + 25 = 95$$

13. What is the key difference between a bar graph and a histogram?

Solution

A bar graph has gaps (discrete categories); a histogram's bars touch (continuous, grouped data).

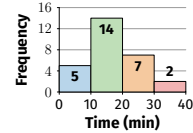
14. How many more people chose Blue than Green (from the bar graph on page 1)?



Solution

$$9 - 4 = 5$$

15. How many people (from the histogram on page 1) take 30 minutes or more?



Solution

2 (read directly)

16. What fraction (of the pizza survey on page 1) prefer Cheese?



Solution

$$6/20 = 3/10$$

17. Why might a company use a sample instead of a census for customer satisfaction?

Solution

A census of every customer is often too slow, costly, or impractical; a well-chosen sample can still give a reliable result.

18. A pictogram's key is 1 icon = 4 items. A row shows 2 whole icons and one half icon. How many items is this?

Solution

$$2 \times 4 + 2 = 10$$