Bar charts, pictograms and other charts: fact sheet

Extra topic (not on the planner) · Learn these facts

Tally charts

𝍸 = 5

𝍸 | | | = 8

Group in fives

Check tally = frequency

Pictograms

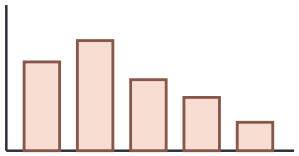
□ = 8

= $3\frac{1}{2}$ × 8 = 28

Always read the key

Part symbols are fractions

Bar charts



Equal widths, equal gaps

Label both axes

Reading scales

find what 1 square is

5 cm ÷ 2 squares = 2.5

Not always 1!

Composite bar charts

each bar split into parts

part = top − bottom

Read where each part starts and ends

Line graphs

join points with straight lines

Used for data over time

Describe the trend

Stem and leaf

16 | 0 2 8

Key: 16 | 0 = 160 cm

Leaves in order, lined up

Always add a key

What's wrong?

Scale	uneven or not from 0
Bars	different widths
Key	missing
Labels	missing

Which sheet do I need?

Pictograms and tally charts ▸
pictograms and tally charts

Bar charts and line graphs ▸
bar charts and line graphs

Stem and leaf diagrams ▸
a stem and leaf diagram

Key words

- **Frequency** how many
- **Key** tells you what a symbol or stem means
- **Trend** the general direction: going up or down
- **Range** biggest − smallest

Exam tips

- Read the key before anything else.
- Work out what one square on the scale is worth.
- Bars: same width, same gaps, labelled.
- Stem and leaf: put the leaves in order and add a key.
- "What's wrong?": check scales, labels, key, widths and the totals.
- Compare two sets: an average **and** the range.

Pictograms and tally charts: fact sheet

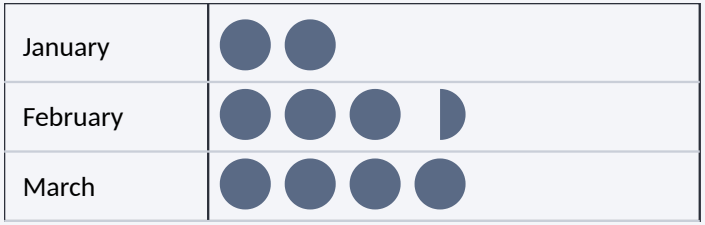
Bar charts, pictograms and other charts · Extra topic · Learn the method

Worked example

QUESTION

The pictogram shows the number of pictures Sam took each month.

How many pictures did Sam take in February?



Key: ● represents 8 pictures

ANSWER

1. The key: one circle = 8 pictures, so half a circle = 4 pictures
2. February has 3 whole circles and a half
3. $3 \times 8 + 4 = 24 + 4$

28 pictures

Use the key; part symbols are fractions of it.

How to do it

1. Read the key.
2. Count whole symbols and multiply.
3. Work out any part symbol ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$).
4. Add up.
5. Drawing: divide the number by the key.

Model answer:

28 pictures

Watch out

- Counting symbols, not multiplying.
- Getting part symbols wrong.
- Forgetting the key.

Bar charts and line graphs: fact sheet

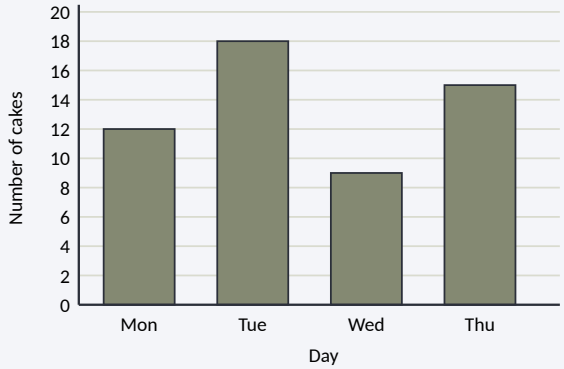
Bar charts, pictograms and other charts · Extra topic · Learn the method

Worked example

QUESTION

The bar chart shows the number of cakes a café sold.

How many more cakes were sold on Tuesday than on Wednesday?



ANSWER

1. Read the top of each bar across to the scale. Each square is 2 cakes.
2. Tuesday = 18, Wednesday = 9
3. 18 − 9

9 more cakes

Read each bar across to the scale.

How to do it

1. Find what each square is worth.
2. Read the top of the bar across to the axis.
3. Composite bars: subtract the bottom of the part.
4. Draw bars the same width with gaps.
5. Line graphs: describe the trend in words.

Model answer:

18 − 9 = 9

Watch out

- Reading the wrong scale.
- Counting squares instead of reading the scale.
- Bars of different widths.

Stem and leaf diagrams: fact sheet

Bar charts, pictograms and other charts · Extra topic · Learn the method

Worked example

QUESTION

Here are the heights, in cm, of 15 sunflowers.

172 160 183 177 180 162 191 184 173 168 180 186 178 197 188

Show this information in an ordered stem and leaf diagram.

ANSWER

1. Stems: 16, 17, 18, 19 (the hundreds and tens)

2. Leaves: the ones digits, written in order

3. Add a key

16	0 2 8
17	2 3 7 8
18	0 0 3 4 6 8
19	1 7

Key: 16 | 0 means 160 cm

Tens (or hundreds and tens) as stems, units as leaves, in order.

How to do it

1. Choose the stems.
2. Write each leaf next to its stem.
3. Redraw with the leaves in order.
4. Line the leaves up in columns.
5. Write a key.

Model answer:

Ordered, with a key

Watch out

- Leaves not in order.
- No key.
- Missing a value: count them.