

Reading a Pie Chart

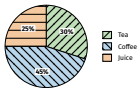


Key idea



A pie chart's sectors are **percent-ages** of a whole — they always sum to **100%**.

Example



Finding an actual amount



40 students surveyed, Coffee = 45%.

45% of 40 = $0.45 \times 40 = 18$ students.

Common mistake

Giving the percentage as the answer when the question asks for an actual amount — multiply by the total.



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Reading a Pictogram



Key idea



A pictogram's **key** states how many real units **one whole icon** represents. A **partial icon** represents that fraction of the key.

Example



Icon count to quantity



Key: 1 icon = 5 medals. A row shows 7 icons.

$$7 \times 5 = 35 \text{ medals.}$$

Common mistake

Counting a half icon as a whole one (or skipping it) — a half icon is worth half the key value.



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Combining Reading with a Calculation



Key idea

Some questions need a **second step** after reading the chart: a **total**, a **difference**, or a **comparison**.

Method

Convert every category to its real value first, *then* add, subtract, or compare.

Example

Pictogram, key = 4: Kea = 12, Tui = 24 goals.

$24 - 12 = 12$ more goals for Tui.

Common mistake

Comparing icon counts or raw sector labels directly, instead of the converted real values.

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Sector Angles

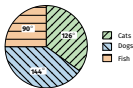


Key idea



A sector's **angle** is its fraction of the data $\times 360^\circ$. All the angles in a pie chart add to **360°** .

Example



Both directions



$$40\% \times 360^\circ = 144^\circ.$$

$$\text{Angle of } 90^\circ \Rightarrow 90 \div 360 \times 100 = 25\%.$$

Common mistake

For a raw-count pie chart, find the **total** first — an angle needs a fraction of the total, not the raw value alone.



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