

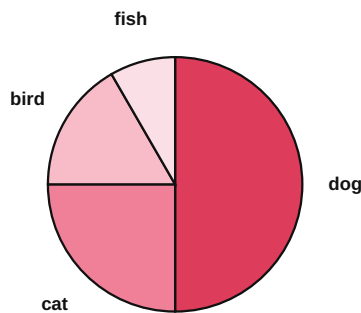
Boost Free Lessons - Year 6 Maths

Lesson 19: Interpreting Sector Graphs

Name: _____ Grade: _____ Date: _____

Worked Example 1

The graph below shows the favourite pets of 24 students. How many chose a dog?



1. A **sector graph** shows how a whole is divided into parts.
2. The dog sector is exactly half of the circle.
3. Half of the students is $24 \div 2 = 12$.
4. You can check the angle: a half turn is 180° , and 180 out of 360 is one half.

12 students chose a dog

Worked Example 2

Using the same graph, how many chose a bird?

1. The bird sector takes up 60° out of the full 360° .
2. As a fraction that is $\frac{60}{360}$, which simplifies to $\frac{1}{6}$.
3. $\frac{1}{6}$ of 24 = $24 \div 6 = 4$.
4. Check the total: $12 + 6 + 4 + 2 = 24$, which matches.

4 students chose a bird

Remember: A full circle is 360° . Half is 180° , a quarter is 90° . Work out the fraction of the circle first, then apply it to the total.



Question 1: Use the graph from the worked example to answer the following.

1. What fraction of the circle is the cat sector?
2. How many students chose a cat?
3. What fraction of the circle is the fish sector?
4. How many students chose a fish?
5. Which pet was most popular?
6. Which pet was least popular?
7. How many more chose a dog than a cat?
8. How many chose either a bird or a fish?



Question 2: Answer the following.

1. A sector takes up 90° . What fraction of the whole is that?
2. A sector takes up 120° . What fraction of the whole is that?
3. A sector represents 25% of a circle. How many degrees is it?
4. Why must all the sectors add to 360° ?
5. Give one advantage of a sector graph over a column graph.
6. Give one disadvantage of a sector graph.



Question 3: Answer the following questions.

1. In a survey of 60 people, half chose summer. How many is that?

2. In the same survey, a quarter chose winter. How many is that?

3. A sector graph shows 30% of 200 students walk to school. How many students?

4. A budget pie graph shows rent as 180° . What fraction of the budget is rent?

5. Explain why a sector graph is a poor choice for showing exact values.





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Answers: Interpreting Sector Graphs**Question 1**

1. $\frac{1}{4}$
2. 6 students
3. $\frac{1}{12}$
4. 2 students
5. Dog
6. Fish
7. 6 more
8. 6 students

Question 2

1. $\frac{1}{4}$
2. $\frac{1}{3}$
3. 90°
4. Because a full turn is 360° , and the sectors together make the whole.
5. It shows at a glance how each part compares with the whole.
6. Exact values are hard to read, especially when sectors are similar in size.

Question 3

1. 30 people
2. 15 people
3. 60 students
4. $\frac{1}{2}$
5. You have to estimate from the size of each sector, so small differences cannot be read accurately.

