

SOLVING ROUTINE AND NON-ROUTINE PROBLEMS USING DATA PRESENTED IN A PIE GRAPH

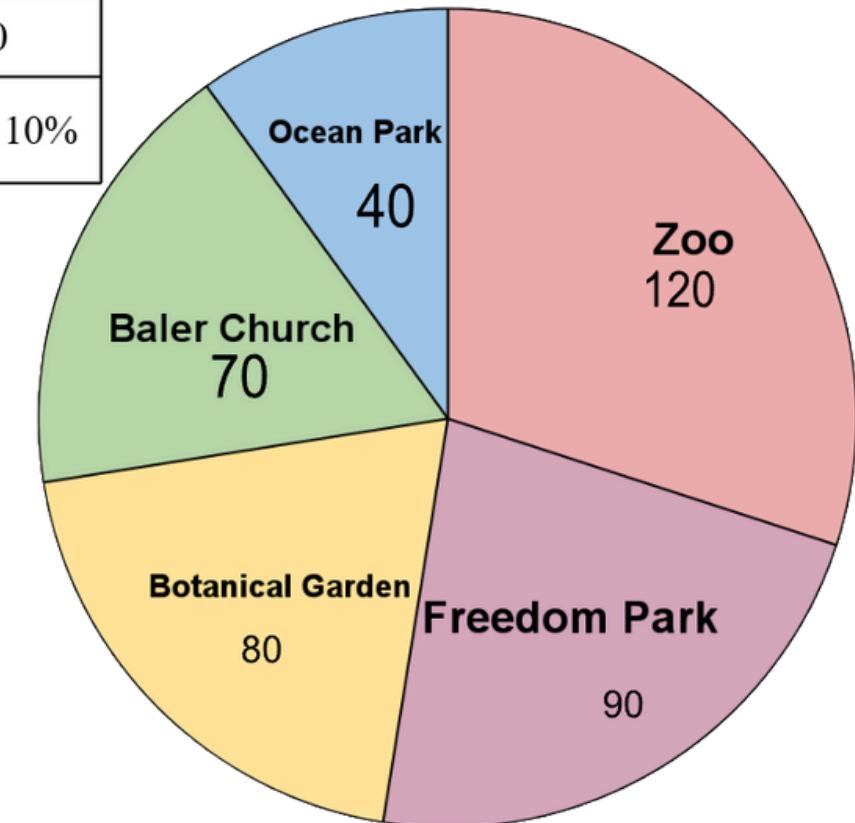
Let's examine the pie chart below and analyze the data it presents.

Example: Mr. Dela Cruz, a school principal, conducted a survey to determine which place the students would most like to visit for a field trip. The options he gave were **Zoo**, **Freedom Park**, **Botanical Garden**, **Baler Church**, and **Ocean Park**. A total of 400 students participated in the survey, with each student casting one vote.

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Destinations	Zoo	Freedom Park	Botanical Garden	Baler Church	Ocean Park
No. of pupils	120	90	80	70	40
Angle Sector	$\frac{3}{10}$ or 30%	$\frac{9}{40}$ or 22.5%	$\frac{1}{5}$ or 20%	$\frac{7}{40}$ or 17.5%	$\frac{1}{10}$ or 10%

$$\text{Angle sector} = \frac{\text{Frequency of data}}{\text{Total frequency}} \times 100$$



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Now let us answer some questions.

1. Which field trip destination got the highest percentage of votes?

Answer: The **Zoo** received the highest percentage of votes, accounting for **30% of the total pupils**, according to the data presented.

2. What percentage of pupils favor Zoo?

Answer:

To compute the percentage: $\frac{3}{10}$ of 100% = $\frac{3}{10} \times 100\% = 30\%$ or $\frac{120}{400} = 30\%$
 $= 30\%$ of the pupils favored the Zoo.

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Now let us answer some questions.

3. How many times more pupils prefer visiting the Botanical Garden than those who prefer visiting the Ocean Park?

Answer: Obtain the data for the pupils who prefer to visit Botanical Garden ($\frac{1}{5}$) and those who prefer the Ocean Park ($\frac{1}{10}$) .

$$\frac{1}{5} \div \frac{1}{10} = \frac{1}{5} \times \frac{10}{1} \text{ or } \frac{80}{40} = 2$$

The number of pupils who preferred the Botanical Garden was twice that of those who preferred Ocean Park.

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Now let us answer some questions.

4. What percentage of the pupil's survey wants to go to Baler Church?

Answer: $\frac{7}{40}$ of 100% = $\frac{1}{10} \times 100\%$ or $\frac{70}{400} = 17.5\%$

= **17.5%**

= 17.5% of pupils like to go to Baler Church.