

✓
100% : Whole = 1 ✓

✓
75% : 3 Quarters = $\frac{3}{4}$

✓
50% : Half = $\frac{1}{2}$ ✓

✓
25%: One quarter = $\frac{1}{4}$ ✓

✓
12.5% = $\frac{1}{8}$ ✓

✓
33% = $\frac{33}{100} = .33$ ✓

✓
66% = $\frac{66}{100} = .66$ ✓

✓
1% = $\frac{1}{100}$ ✓

✓
10% = $\frac{1}{10}$ ✓

Degree Values

$$100\% \rightarrow 360^\circ$$

$$10\% \rightarrow \frac{1}{10} \rightarrow \frac{360}{10} = 36^\circ$$

$$1\% \rightarrow \frac{1}{100} \rightarrow \frac{360}{100} = 3.6^\circ$$

Q1. Study the given Pie Chart & answer the questions:

i.) What is family's yearly estimate for Savings & Charity put together?

a.) Rs 1,05,000 /-

$$100\% = 5,25,000 \quad - \text{Time Save}$$

b.) Rs 94,500 /-

- X

c.) Rs 78,750 /-

$$S+C = ? = 10\% + 8\% \quad - \checkmark$$

d.) None of these

$$= 18\%$$

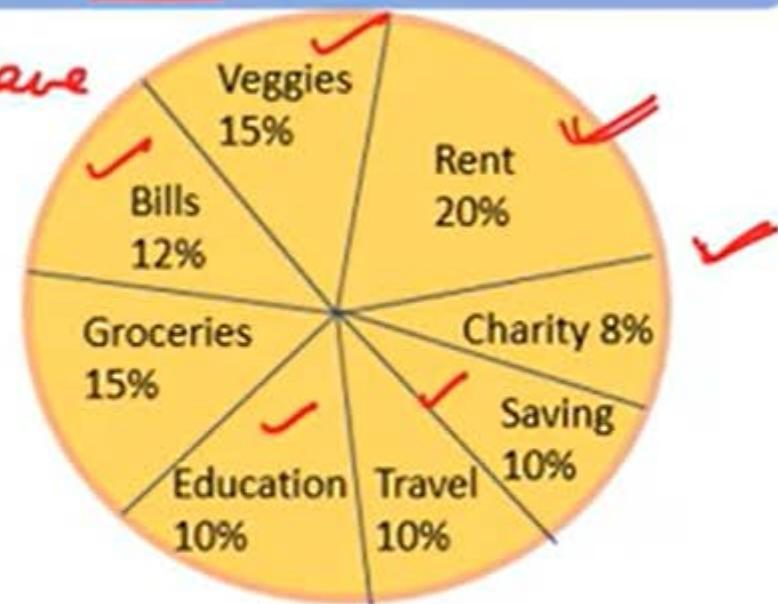
$$18\% \text{ of } 5,25,000 /- \quad = \frac{18}{100} \times 5,25,000 \quad \checkmark$$

$$10\% = \frac{1}{10} \times 5,25,000$$

$$= 52,500$$

$$18\% = 20\% - 2\% \quad = 1,05,000 - 2(5250) \quad \checkmark \rightarrow$$
$$= 1,05,000 - 10,500$$

$$\checkmark = 94,500 \text{ Rs /-}$$



Total Estimated Yearly
Expense: Rs 5, 25,000 / -

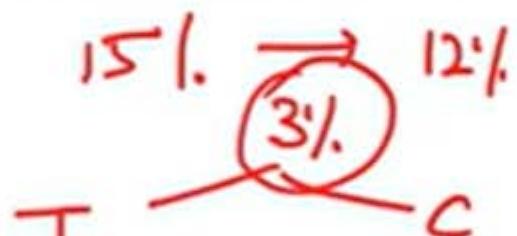
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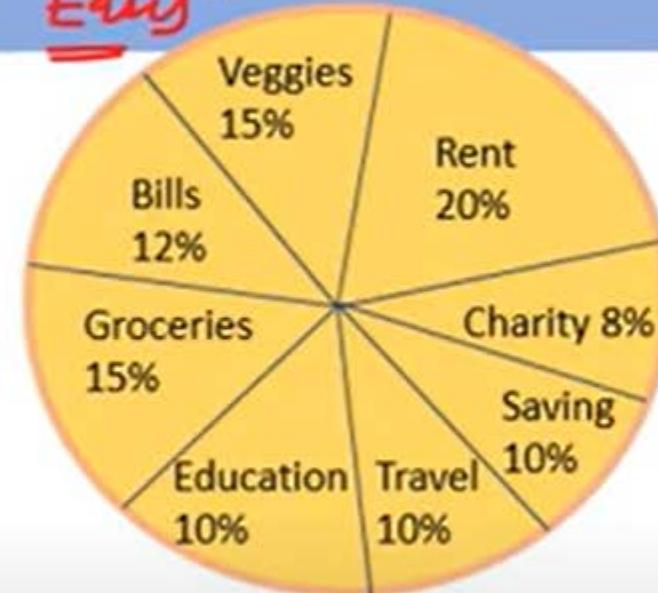
ii.) Online offers made them spend 3% less than the estimates on Groceries. They spent this saved amount equally on Travel & Charity. What will be the difference between expenses on Travel & Charity? Easy

- a.) Same as before
- b.) Expenses on Travel increased more than the expenses on Charity
- c.) None of these
- d.) Data Insufficient



$$(i) 10\% - 8\% = 2\%$$

$$(ii) \frac{10\% + 8\%}{2} - \frac{(8\% + 2\%)}{2} = 2\%$$



Total Estimated Yearly
Expense: Rs 5, 25, 000/-

Study the given Pie Chart & answer the questions:

iii.) Expense on Groceries is more than the expense on Travel by what percent?

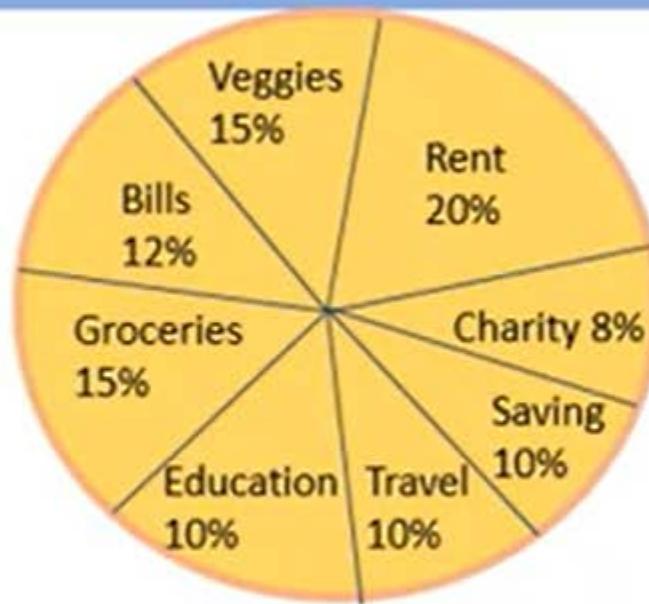
- a. 150%
- b. 75%
- c. ~~50%~~
- d. 33.3%

Easy.

$$\begin{array}{ccc} \underline{100\%} & \rightarrow & 100 \text{ Rs/-} \\ \hline G & & T \\ 15\% & & 10\% \\ 15 \text{ Rs/-} & & 10 \text{ Rs/-} \end{array}$$

$$15 - 10 = 5$$

$$\frac{5}{10} \times 100 = \underline{\underline{50\%}}$$



Total Estimated Yearly
Expense: Rs 5, 25, 000/-

Study the given Pie Chart & answer the questions:

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Easy.

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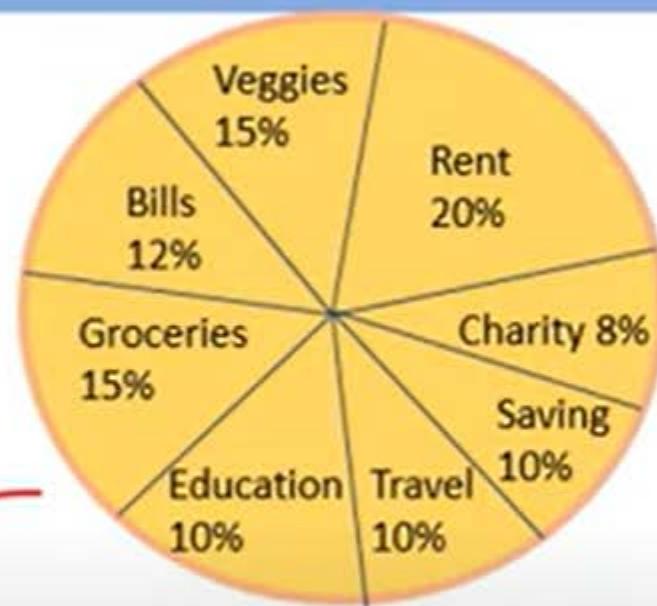
$$15 - 10 = 5$$

$$\frac{5}{10} \times 100 = \underline{\underline{50\%}}$$

$$\left[\frac{15}{10} \times 100 \right]$$

$$= 150\%$$

Grocery as
% of Travel.



Total Estimated Yearly
Expense: Rs 5, 25, 000/-

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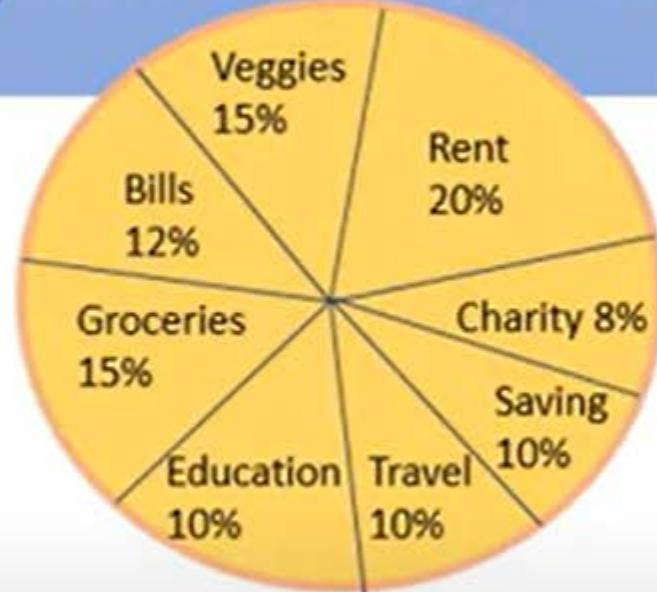
Study the given Pie Chart & answer the questions:

iv.) Other than getting a discount of 10% on rent and saving Rs 15,500 on travel, the family estimated their expenses correctly. What were their actual expenses for the year?

$$\begin{array}{l} E = 5,25,000 \quad \checkmark \\ \quad - 26,000 \\ \hline 4,99,000 \end{array}$$

(i) Rent $\rightarrow 1,05,000$
 $10\% \rightarrow \frac{1}{10} \rightarrow 10,500$

(ii) $\rightarrow 15,500$
 $\hline 26,000$



Total Estimated Yearly
Expense: Rs 5, 25, 000/-

Study the given Pie Chart & answer the questions:

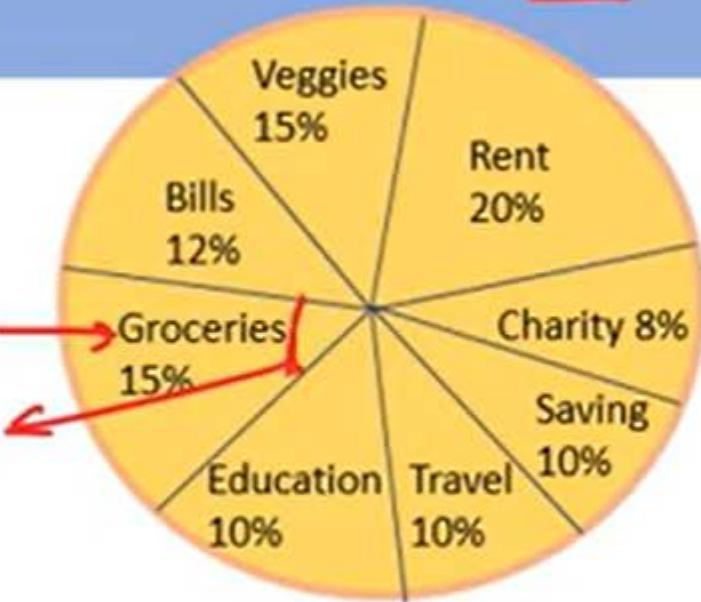
- v.) What is the sectorial angle made by "Charity" sector? → Imp. Easy.
- a.) 36° b.) 25° c.) 28.8° d.) 35.6°

$$100\% \quad 360^\circ \quad O$$

$$1\% = \frac{360}{100} = 3.6^\circ$$

$$C \rightarrow 8\% \rightarrow 8 \times 3.6 = 28.8^\circ$$

*Sector
sectorial
angle*



Total Estimated Yearly
Expense: Rs 5, 25, 000/-

Q2. Pehalgam gets tourists from country X and Y. Percentage wise distribution of the influx of tourists is given for first half of the year.

i.) What is the ratio of tourists from country Y coming in during April and May?

$$\frac{A}{M} = \frac{\left(\frac{8}{100} \times 90,000 \right) \times \frac{5}{12}}{\left(\frac{12}{100} \times 90,000 \right) \times \frac{8}{15}}$$



Total no. of tourists = 90,000	
Month	Ratio (X:Y)
Jan	8 : 7
Feb	4 : 5
March	3 : 2
April	7 : 5
May	7 : 8
June	4 : 11

$$A \rightarrow 7:5$$

$$\frac{7}{12}; \frac{5}{12}$$

$$M \rightarrow 7:8 \rightarrow \frac{8}{15}$$



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$$\frac{A}{M} = \frac{\left(\frac{8}{12} \times 90,000 \right) \times \frac{5}{12}}{\left(\frac{12}{12} \times 90,000 \right) \times \frac{8}{15}}$$

$$= \frac{8 \times 5}{12 \times 8} = \frac{5}{12} \times \frac{15}{12} \quad \boxed{4} = \frac{25}{48} = \boxed{(25:48)}$$

$$A \rightarrow 7:5 \\ \frac{7}{12}; \frac{5}{12}$$

$$M \rightarrow 7:8 \rightarrow \frac{8}{15}$$



Q2. Pehalgam gets tourists from country X and Y. Percentage wise distribution of the influx of tourists is given for first half of the year.

ii.) If 55% of the tourists from City X in May were adults, how many were children?

Easy

$$\text{May} \rightarrow \frac{12}{100} \times 90,000 = 12 \times 900$$

$$\text{May} \rightarrow 7:8 \rightarrow \frac{7x}{15x}$$

✓

$$\frac{7}{15} \times (12 \times 9000) \times \frac{45}{100}$$



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$$\text{May} \rightarrow 7:8 \rightarrow \frac{7x}{15x} \checkmark$$

$$\frac{7}{15} \times (12 \times 900) \times \frac{45}{100} 3 = \left| \begin{array}{l} 7 \times 12 \times 9 \times 3 \\ = 108 \times 21 \\ = 2268 \end{array} \right. \xrightarrow{\text{children}}$$



Total no. of tourists = 90,000

Month	Ratio (X:Y)
Jan	8 : 7
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Q2. iii.) If the average expenditure by a tourist from Country X was Rs 10,000/- during the season. What was the total expenditure by tourist from Country X in Feb. ?

$$\text{Feb} \rightarrow \frac{22}{100} \times 90,000 \\ = 22 \times 900 \\ =$$

$$\text{Feb} \rightarrow 4:5 \Rightarrow \frac{4x}{9x} = \frac{4}{9}$$

$$\text{Feb} \rightarrow \frac{4}{9} \times (22 \times 900) \times 10,000$$



Total no. of tourists= 90,000

Month	Ratio (X:Y)
Jan	8 : 7
Feb	4 : 5
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April	7 : 5
May	7 : 8
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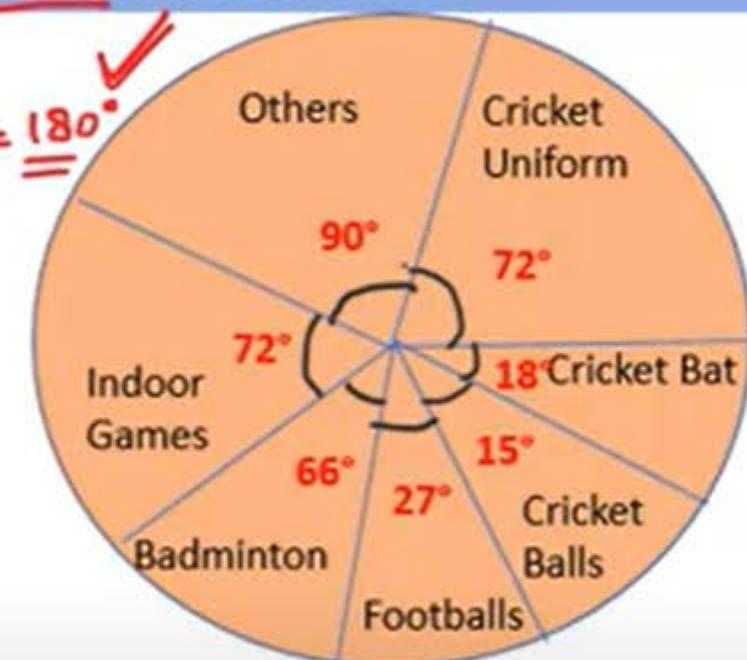
Q3. Sales of a distribution company dealing in sports goods are as follows :

i.) Which of the following goods contribute to half of the business?

- a.) Indoor Games + Cricket Bat $\rightarrow 72 + 18 = 90^\circ \times$
- b.) Cricket Uniform + Cricket Bat + Others $\rightarrow 72 + 18 + 90 = 180^\circ$
- c.) Badminton + Footballs + Cricket Bat + Cricket Balls
- d.) None of the above

$360^\circ \rightarrow$ Total sales

~~$180^\circ \rightarrow$~~



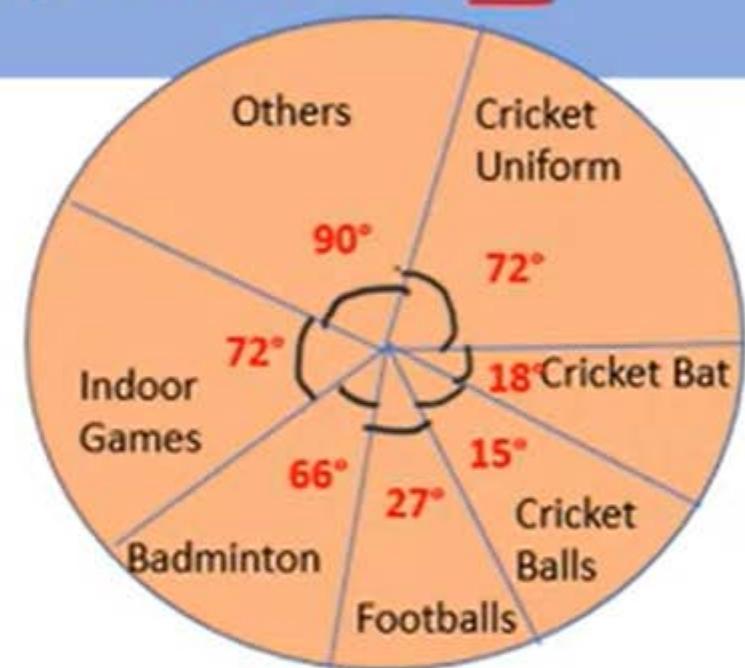
Q3. Sales of a distribution company dealing in sports goods are as follows

ii.) If the sales from Cricket uniforms are 9,50,000 Rs/-, what is the ratio between sales from Cricket bat and Badminton?

$$\textcircled{1} \quad 72^\circ \rightarrow 9,50,000; \quad \frac{950000}{72} \times 360 \quad \checkmark$$

$$\frac{C.B}{B.M.} \quad \checkmark = ? \quad \times$$

$$\frac{C.B}{B.M.} = \frac{18}{66} \times \frac{8}{8} = \frac{18}{66} = \frac{3}{11} = 3:11$$



Q3. Sales of a distribution company dealing in sports goods are as follows

iii.) What percent of sales come from the sales of
Badminton ?

- ~~a.) 20%~~ ~~b.) 18.3%~~ ~~c.) 20.5%~~ ~~d.) 21.2%~~

.

$$\begin{aligned}66^\circ \\ 360^\circ \rightarrow 100\% \\ 100\% \rightarrow 36^\circ \\ 20\% \rightarrow 72^\circ \rightarrow \underline{\underline{66^\circ}} \checkmark\end{aligned}$$



Q3. Sales of a distribution company dealing in sports goods are as follows

iv.) If the sales from Cricket Uniform are 9,50,000 Rs/-.

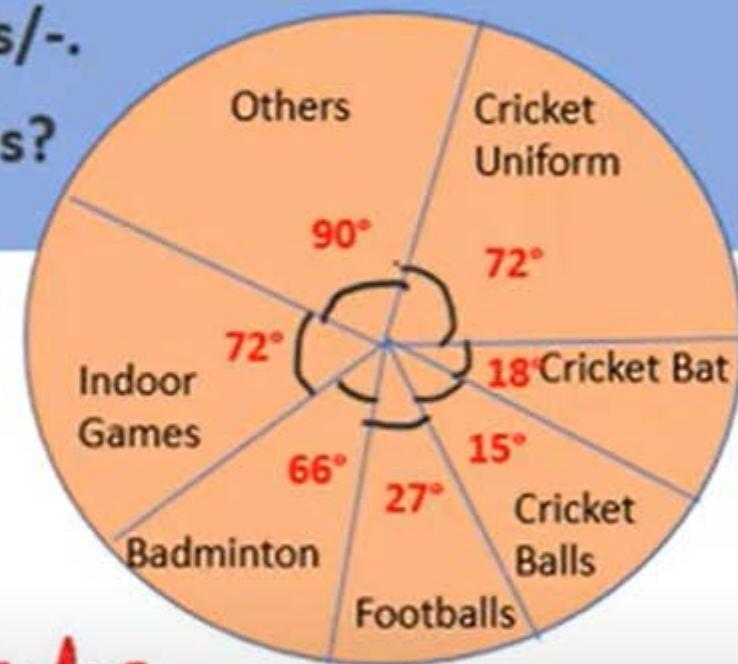
what is the average sales of Footballs & Cricket Balls?

- a.) 2,50,000 Rs/- b.) 2,77,083 c.) 3,00,000 d.) 3,17,000

$$72^\circ \rightarrow 9,50,000$$

$$FB + CB \rightarrow 27^\circ + 15^\circ = 42^\circ$$

$$\frac{950,000}{323612} \times 42^\circ = \frac{950,000 \times 7}{12 \times 2} = \text{Avg.}$$



Practice Questions

- Q1. Find the sectorial angle formed by a section representing 23% data in the Pie Chart. **Answer: 82.8°**
2. A sector forms 144° sectorial angle in a Pie Chart. What percent of data does this sector represent? **Answer: 40%**