Question 1.

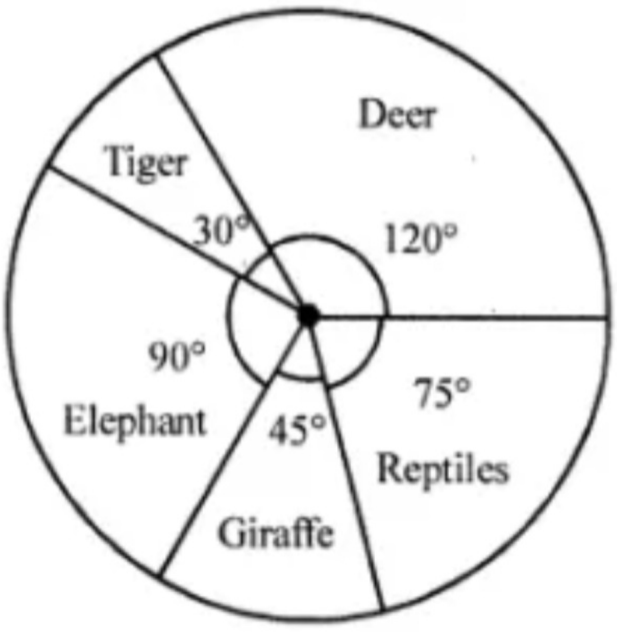
The following data represents the different number of animals in a zoo. Prepare a pie chart for the given data.

Animals	Deer	Tiger	Elephant	Giraffe	Reptiles
Number of animals	40	10	30	15	25

Solution:

Pie chart for the data is given below:

Animals	No. of animals	Central degree
Deer	40	$\frac{360° \times 40}{120} = 120°$
Tiger	10	$\frac{360° \times 10}{120} = 30°$
Elephant	30	$\frac{360° \times 30}{120} = 90°$
Giraffe	15	$\frac{360° \times 15}{120} = 45°$
Reptiles	25	$\frac{360° \times 25}{120} = 75°$
Total	120	360°



Question 2.

The following data represents the monthly expenditure of a family (in T) on various items. Draw a pie chart to represent this data.

Items	Food	House rent	Education	Savings	Health	Others
Expenditure (in ₹)	12500	5000	7500	10000	5000	10000

Solution:

Items	Expenditure (in ₹)	Central angles
Food	12500	$\frac{12500 \times 360°}{50000} = 90°$
House rent	5000	$\frac{5000 \times 360°}{50000} = 36°$
Education	7500	$\frac{7500 \times 360°}{50000} = 54°$
Savings	10000	$\frac{10000 \times 360°}{50000} = 72°$
Health	5000	$\frac{5000 \times 360°}{50000} = 36°$
Others	10000	$\frac{10000 \times 360°}{50000} = 72°$
Total	50000	360°

Pie chart representing the above given data is given:

Question 3.

The following data represents the percentage distribution of the expenditure incurred in publishing a book.

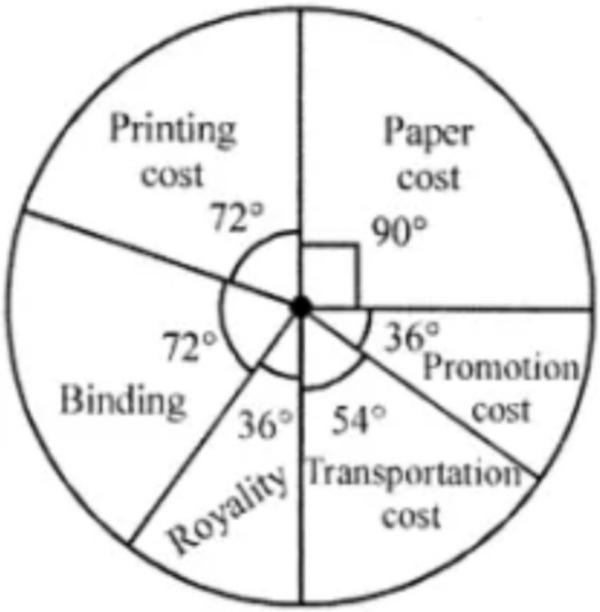
Items	Paper cost	Printing cost	Binding	Royality	Transportation cost	Promotion cost
Expenditure (in %)	25%	20%	20%	10%	15%	10%

Draw a pie chart to represent this data.

Solution:

Items	Expenditure	Central angles
Paper cost	25%	$\frac{360° \times 25}{100} = 90°$
Printing cost	20%	$\frac{360° \times 20}{100} = 72°$
Binding	20%	$\frac{360° \times 20}{100} = 72°$
Royality	10%	$\frac{360° \times 10}{100} = 36°$
Transportation cost	15%	$\frac{360° \times 15}{100} = 54°$
Promotion cost	10%	$\frac{360° \times 10}{100} = 36°$
Total	100%	360°

Pie chart representing the above given data is given:



Question 4.

The following data represents the number of students got admission in different streams of a college:

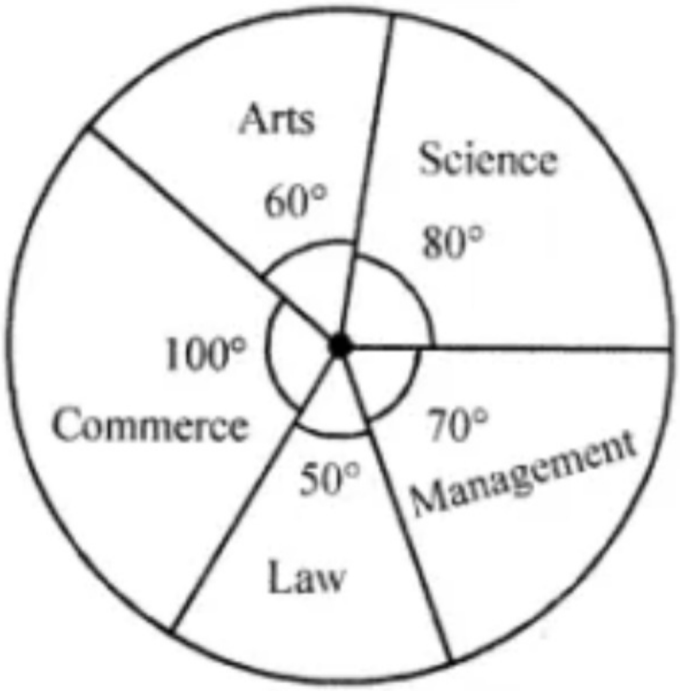
Stream	Science	Arts	Commerce	Law	Management
Number of students	400	300	500	250	350

Draw a pie chart to represent this data.

Solution:

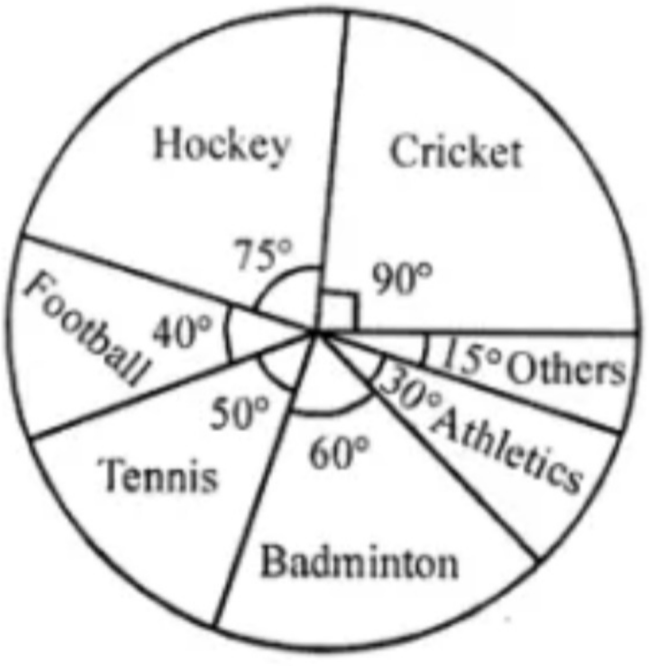
Stream	Number of students	Central angle
Science	400	$\frac{400 \times 360°}{1800} = 80°$
Arts	300	$\frac{300 \times 360°}{1800} = 60°$
Commerce	500	$\frac{500 \times 360°}{1800} = 100°$
Law	250	$\frac{250 \times 360°}{1800} = 50°$
Management	350	$\frac{350 \times 360°}{1800} = 70°$
Total	1800	360°

Pie chart representing the above given data is given below:



Question 5.

The adjoining pie chart shows the expenditure of a country on various sports during year 2012. Study the pie chart carefully and answer the following questions:



(i) What percent of total expenditure is spent on cricket?

(ii) How much percent more is spent on hockey than that on tennis?

(iii) If the total amount spent on sports in 2012 is ₹1,80,00,000, then find amount spent on Badminton,

(iv) If the total amount spent on sports in 2012 is ₹2,40,00,000 then find the amount spent on cricket and hockey together.

Solution:

From the given pie chart representing the expenditure

incurred on various sports during 2012.

(i) Expenditure on cricket = 90° = $\frac{90}{360^\circ}$ × 100% = 25%

(ii) Expenditure on hockey = 75° = $\frac{75}{360^\circ} \times 100\% = \frac{125}{6}\% = 20\frac{5}{6}\%$

$\therefore \frac{125}{6} - \frac{125}{9} = \frac{125}{18} = 6.95\%$ more

Expenditure on tennis = 50° = $\frac{50}{360^\circ}$ × 100% = $\frac{125}{9}$% = 13.9%

(iii) Total amount spent on sports = ₹1,80,00,000

Then amount spent on Badminton = ₹ 1,80,00,000 × $\frac{60}{360^\circ}$ = ₹30,00,000

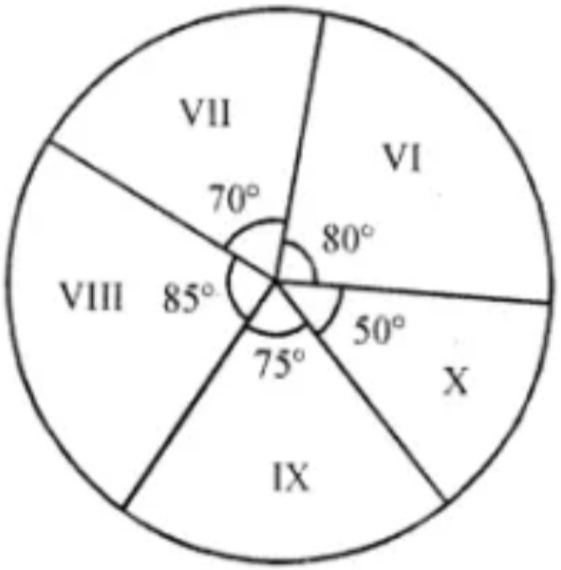
(iv) If total amount spent on sports = 2,40,00,000,

then amount spent on cricket and hockey together

= 90° + 75° = 165° = $\frac{165^\circ}{360^\circ}$ × 2,40,00,000 = 1,10,00,000

Question 6.

The adjoining pie chart shows the number of students enrolled in class VI to class X of a school.



If 1440 students are enrolled from VI to X, then answer the following questions:

(i) How many students are enrolled in class VIII?

(ii) How many students are more in class IX than in class X?

(iii) What is the sum of students enrolled in VII and VIII?

(iv) Find the ratio of students enrolled in VI to students enrolled in X.

Solution:

The given pie chart is representing the enrolment of students from class VI to class X in a school.

Total students were enrolled = 1440

(i) Enrolment of class VIII = $\frac{85}{360^\circ} \times 1440 = 340$ students

(ii) Difference in X and IX class enrolement = 75° – 50 = 250°

$\frac{25}{360^\circ} \times 1440 = 100$ students

(iii) Sum of students enrolled in VII and VIII classes

= 70° + 85° = 155° = $\frac{155}{360^\circ}$ × 1440 = 620 students

Ratio between the students enrolled in VI to students enrolled in X classes = 80° : 50° = 8 : 5