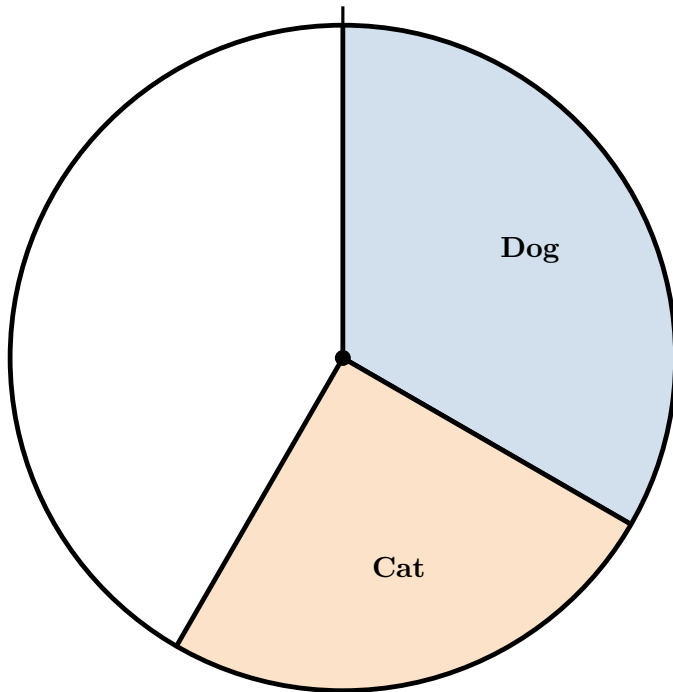


Drawing ^{پائی چارٹ} Pie Charts with a ^{زاویہ نما} Protractor

Name: _____ Date: _____

Key formula: sector angle = $\frac{\text{amount}}{\text{total}} \times 360^\circ$

Chart 1 – Favourite Pets (class of 36 students)



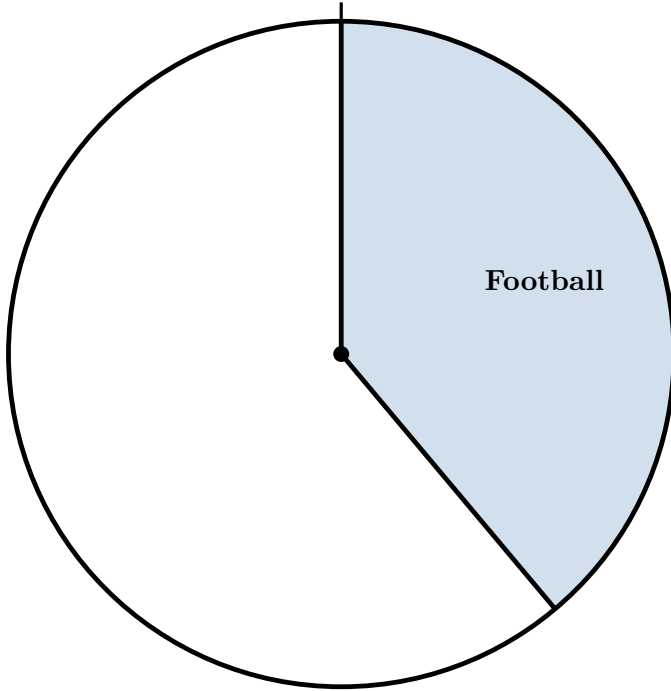
Pet	No.	^{کسر} Fraction	^{زاویہ} Angle
Dog	12	$\frac{1}{3}$	120°
Cat	9	$\frac{1}{4}$	90°
Fish	8	$\frac{2}{9}$	80°
Rabbit	5	$\frac{5}{36}$	50°
Other	2	$\frac{1}{18}$	20°
Total	36	1	360°

Getting started: The **Dog** (120°) and **Cat** (90°) ^{قطاع} sectors have already been drawn for you. Starting from the Cat ^{نصف قطر} radius, use your ^{زاویہ نما} protractor to add **Fish** (80°), **Rabbit** (50°) and **Other** (20°) in order. Label each ^{قطاع} sector when you have drawn it.

Questions:

- Complete the ^{پائی چارٹ} pie chart
- Which pet was chosen by exactly $\frac{1}{3}$ of the class?
- Which single pet was chosen by exactly 9 students? _____

Chart 2 – Sports Club Memberships (36 members)



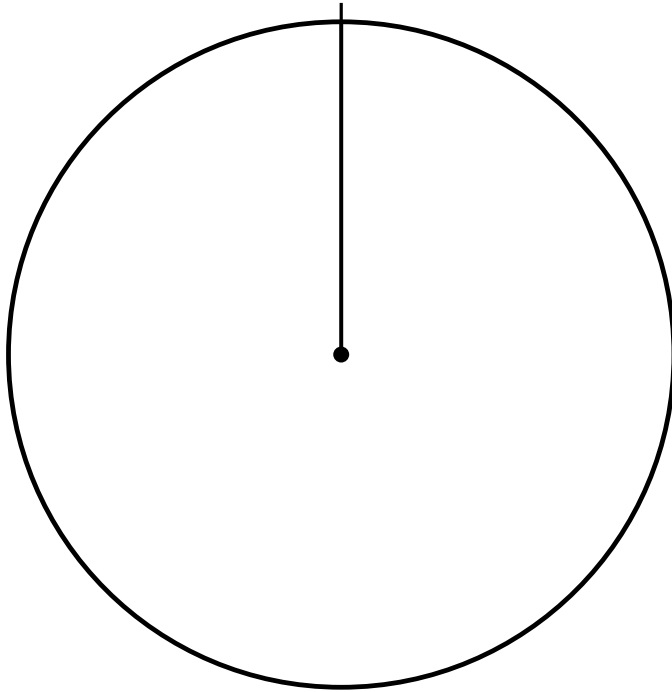
Sport	No.	^{کسر} Fraction	^{زاویہ} Angle
Football	14	$\frac{7}{18}$	140°
Swimming	9	$\frac{1}{4}$	90°
Tennis	6	$\frac{1}{6}$	60°
Basketball	5	$\frac{5}{36}$	50°
Other	2	$\frac{1}{18}$	20°
Total	36	1	360°

Questions:

- Complete the ^{پائی چارٹ} pie chart.
- Which sport has a ^{زاویہ قطاع} sector angle of exactly 90°? _____
- What ^{کسر} fraction of members play **Tennis**? _____
- How many ^{ڈگری} degrees are taken up by the **three smallest** sports combined?

Answer: _____°

Chart 3 – How Students Spend Most of Their Pocket Money (36 students)

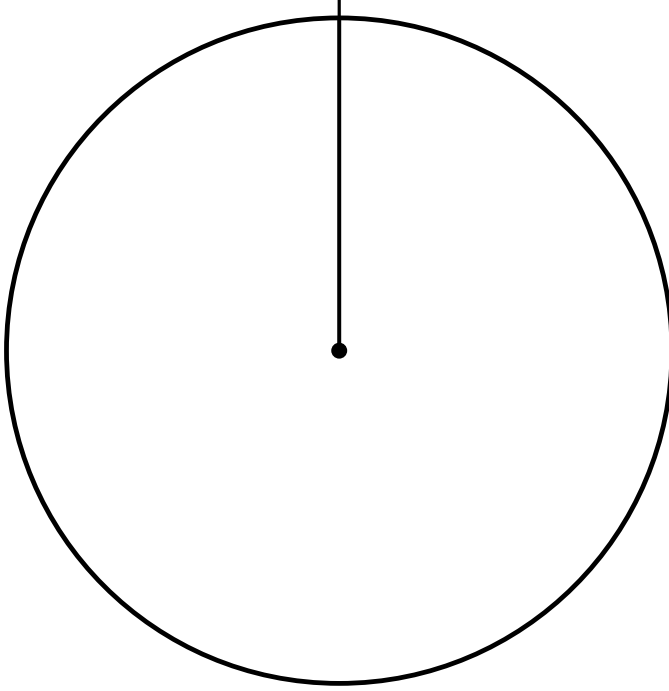


Category	No.	 Fraction	 Angle
Food & Drink	12	$\frac{1}{3}$	120°
Games	9	$\frac{1}{4}$	90°
Clothes	6	$\frac{1}{6}$	60°
Savings	6	$\frac{1}{6}$	60°
Other	3	$\frac{1}{12}$	30°
Total	36	1	360°

Questions:

- Complete the  pie chart.
- Two categories have the same  sector angle. Which two are they? _____

Chart 4 – Colours of Cars in a Car Park (60 cars)



Colour	No.	كسر Fraction	زاوية Angle
White	20		
Black	15		
Silver	12		
Red	9		
Other	4		
Total	60	1	360°

Instructions:

- Complete the كسر Fraction column. Write each كسر fraction in its ساده ترین صورت simplest form.
- Use $\text{angle} = \frac{\text{amount}}{\text{total}} \times 360^\circ$ to complete the زاوية Angle column.
- Check your حاصل جمع زاوية angles sum to 360° , then draw and label the پائی چارٹ pie chart.

Questions:

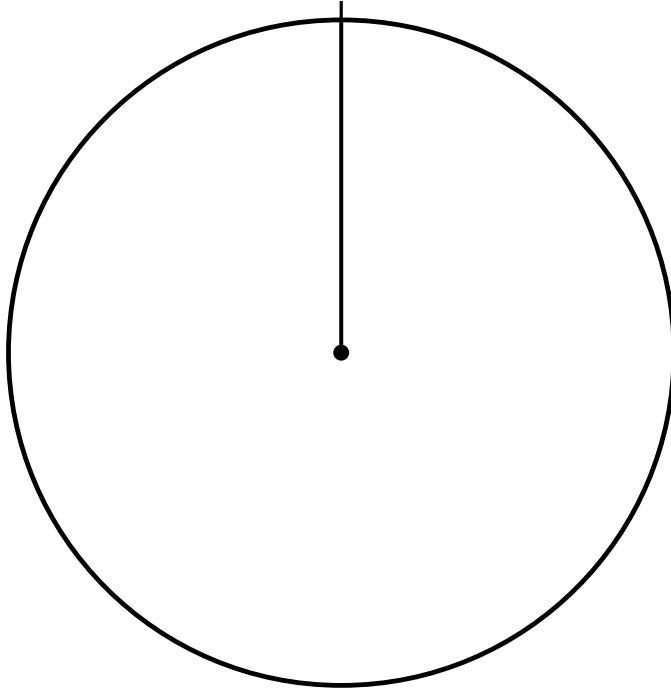
- Complete the table.
- Complete the پائی چارٹ pie chart.
- What زاوية angle represents **White** cars? Show your working.

Answer: _____°

4. What  fraction of cars are **Black**? _____

5. Check: do your  angles add up to 360°? Write your total. _____°

Chart 5 – Languages Spoken at Home (survey of 90 students)



Language	No.	کسر Fraction	زاویہ Angle
English	45		
Urdu	18		
Polish	9		
Punjabi	9		
Other	9		
Total	90		

Questions:

- Complete the table.
- Complete the پائی چارٹ pie chart.
- Three languages have the **same** number of speakers. What زاویہ angle does each of their قطاع sectors have?

Answer: _____°

- English speakers make up what کسر fraction of the survey? Write it in its سادہ ترین صورت simplest form. _____
- Challenge:** If 10 more students joined the survey and they all spoke Polish, what would the

new زاویه angle for Polish be? Show your full working in the space below.

Answer: _____°