Comparative pie charts

Grade 6 | Higher | 5 questions, 20 marks

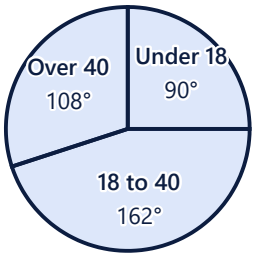
GCSE Statistics topic practice

Name: _____ **Date:** _____ **Score:** _____ **/ 20**

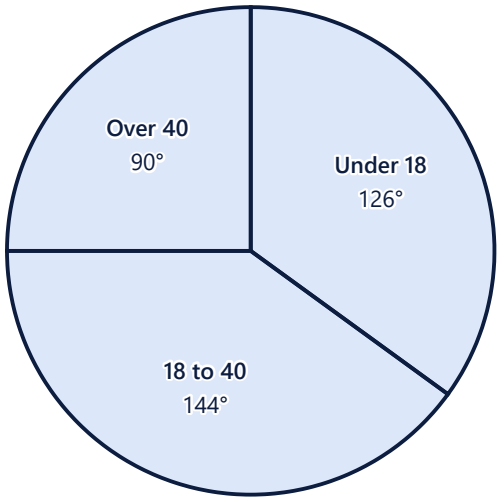
1 The comparative pie charts show the ages of the members of a climbing club in 2010 and in 2020.

a. The pie chart for 2020 has a larger area than the pie chart for 2010. What does this show? (1)

b. Work out how many more members aged under 18 the club had in 2020 than in 2010. (2)



2010: 100 members



2020: 400 members

Diagram NOT accurately drawn

(3 marks)

Free for classroom and home use: print, photocopy and share. Not for resale or re-hosting.

2 Rina is drawing comparative pie charts for the number of students at her college. In 2019 there were 320 students. In 2024 there were 500 students.

Rina draws the pie chart for 2019 with a radius of 4 cm. She then works out $500 \div 320 \times 4 = 6.25$ and draws the pie chart for 2024 with a radius of 6.25 cm.

a. Explain what is wrong with Rina's method. (1)

b. Work out the correct radius for the pie chart for 2024. (2)

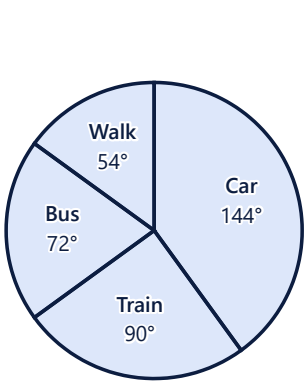
(3 marks)

---

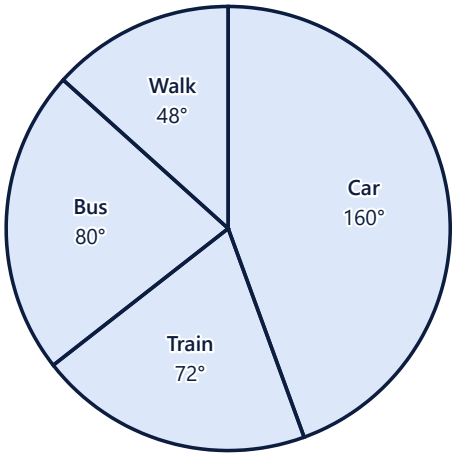
3 The comparative pie charts show how visitors travelled to a music festival in 2015 and in 2025. There were 200 visitors in 2015 and 450 visitors in 2025. The pie chart for 2015 has a radius of 3 cm.

a. Work out the radius of the pie chart for 2025. (2)

b. Tariq says, "The angle for Train is smaller in 2025, so fewer visitors travelled by train in 2025 than in 2015." Is Tariq correct? You must show your working. (2)



2015: 200 visitors



2025: 450 visitors

Diagram NOT accurately drawn

(4 marks)

Free for classroom and home use: print, photocopy and share. Not for resale or re-hosting.

4 A charity is drawing comparative pie charts to show where its income came from in 2015 and in 2025. The pie chart for 2015 has been drawn with a radius of 2 cm. The total income in 2015 was £80 000.

The table shows the income in 2025.

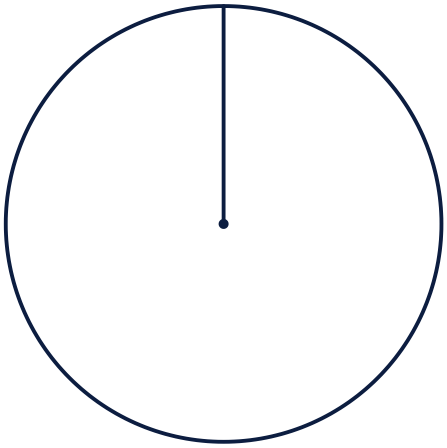
Source of income	Donations	Shops	Events
Income in 2025	£96 000	£60 000	£24 000

a. Show that the pie chart for 2025 should have a radius of 3 cm. (2)

b. The circle for 2025 has been drawn for you. Complete the pie chart for 2025. (3)



2015: £80 000



2025

(5 marks)

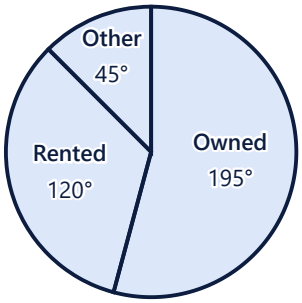
Free for classroom and home use: print, photocopy and share. Not for resale or re-hosting.

5 The comparative pie charts show whether the households in two towns own their home, rent their home or have some other arrangement. There are 240 households in the survey for Town A. The pie chart for Town A has a radius of 2 cm and the pie chart for Town B has a radius of 3 cm.

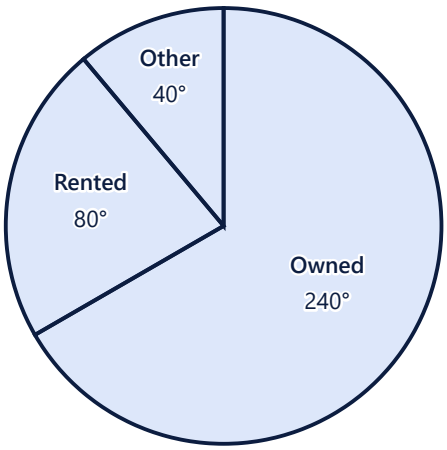
a. Work out the number of households in the survey for Town B. (2)

b. Sofia says, "The Rented sector is bigger for Town A, so more households rent in Town A than in Town B." Is Sofia correct? You must show your working. (2)

c. Compare the proportion of households that rent in Town A with the proportion that rent in Town B. (1)



Town A: 240 households



Town B

Diagram NOT accurately drawn

(5 marks)

End of questions | Total 20 marks

Free for classroom and home use: print, photocopy and share. Not for resale or re-hosting.