GCSE Maths: Pie charts (Higher): worksheet

GCSE Maths - Statistics - Higher - Lesson 24.7

Name: Date: Score:

14 questions. Write your answers in the spaces. Answers and step-by-step help are free at **websink.site/gcse/maths/ch24-statistics/higher/pie-charts/**

Exercise 24G Pie charts

Calculator allowed

1 Work out the angle for each sector in a pie chart for each set of data.

(a) Pets: dog 8, cat 6, fish 4, other 2 (20 pets)

Answer:

(b) Lessons: maths 9, science 6, art 3, PE 6 (24 students)

Answer:

(c) Fruit: apple 30, pear 20, banana 25, orange 15 (90 pieces)

Answer:

2 The table shows the colours of the cars in a car park.

Colour	Cars
Red	14
Blue	10
Silver	22
Black	14

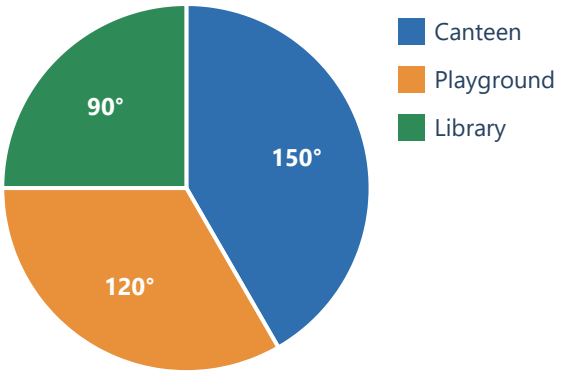
Draw a pie chart to show this information.

Answer:

3 Twenty-five children voted for their favourite playground game. The results are: tag 6, football 9, skipping 4, hopscotch 6. Work out the angle for each sector, giving your answers to 1 decimal place if necessary.

Answer:

4 The pie chart shows how 72 students spend their lunch break. The angle for “canteen” is 150°, for “playground” is 120° and for “library” is 90°. (a) What fraction of the students spend lunch in the canteen? (b) How many students spend lunch in the library? (c) How many students spend lunch in the playground?



(a) Fraction in the canteen

Answer:

(b) Students in the library

Answer:

(c) Students in the playground

Answer:

5 **Each pie chart has a sector with the given angle. Work out the number represented by that sector.**

(a) Total 180 people; sector 60°

Answer:

(b) Total 90 people; sector 140°

Answer:

(c) Total 240 votes; sector 75°

Answer:

(d) Total 54 cars; sector 100°

Answer:

6 **Work out the total number of items represented by each whole pie chart.**

(a) A sector of 30° represents 5 people.

Answer:

(b) A sector of 80° represents 16 students.

Answer:

(c) A sector of 45° represents 10 votes.

Answer:

7 **A pie chart has sectors of 90°, 120°, 100° and one other sector. The total number of people is 72. (a) Work out the angle of the missing sector. (b) How many people does the missing sector represent?**

(a) Missing angle

Answer:

(b) People in the missing sector

Answer:

8 **In a pie chart, a sector has angle 54°. What percentage of the data does it represent?**

Answer:

9 Two pie charts show how students in Year 9 and in Year 11 travel to school. In Year 9 (120 students) the sector for "bus" is 60°. In Year 11 (180 students) the sector for "bus" is 50°. Which year group has more students travelling by bus?

Answer:

10 Dev says: "A pie chart shows a sector of 90° for football, so 90 people chose football." Explain his mistake.

Answer:

11 Pie chart A has radius 3 cm and shows data for 100 people. Pie chart B shows data for 400 people and the area of each pie chart is in proportion to the number of people. Work out the radius of pie chart B.

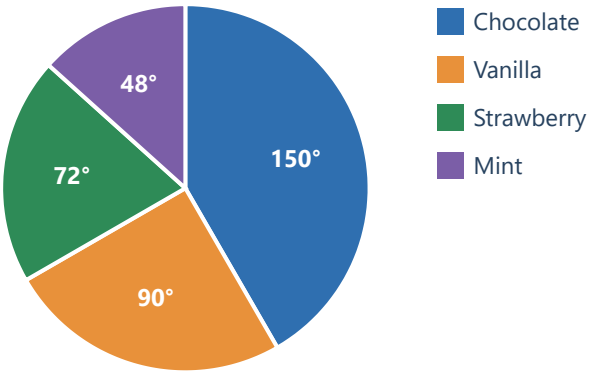
Answer:

12 The frequency table shows the drinks chosen by 25 people. Work out the angle for each drink, and show that the angles add up to 360°.

Drink	Frequency
Tea	7
Coffee	11
Juice	5
Water	2

Answer:

13 A pie chart shows the favourite ice cream flavours of 60 people. The angles are chocolate 150°, vanilla 90°, strawberry 72° and mint 48°.
(a) How many people chose vanilla? (b) What percentage chose strawberry?



(a) People who chose vanilla

Answer:

(b) Percentage who chose strawberry

Answer:

14 In two pie charts the sector for "cycling" is 90° in both. The first pie chart shows 80 students and the second shows 120 students. How many more students cycle in the second pie chart than in the first?

Answer:

© Websink Prep UK. Free for classroom and home use; please do not resell. websink.site