Reading pie charts

Grade 2 | Worked solutions

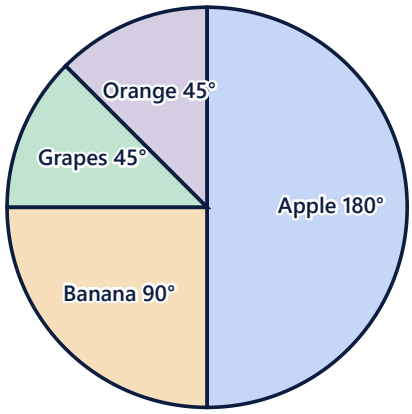
GCSE Statistics topic practice

1 40 pupils were asked to name their favourite fruit. The pie chart shows the results.

a. Write down the most popular fruit. (1)

b. What fraction of the pupils chose Banana? (1)

c. Work out the number of pupils who chose Apple. (1)



(3 marks)

a) the biggest sector

Apple

b) Banana is 90° out of 360°

$\frac{90}{360} = \frac{1}{4}$

One quarter chose Banana

c) Apple is 180°, which is half of the circle

$40 \div 2 = 20$

a) Apple b) $\frac{1}{4}$ c) 20 pupils

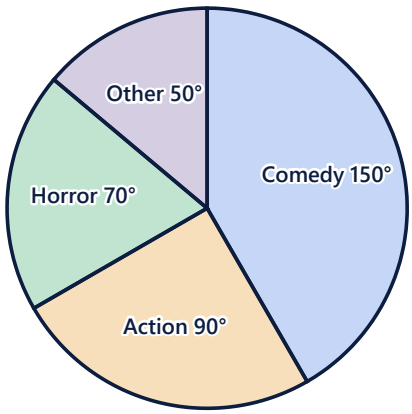
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2 72 people were asked to name their favourite type of film. The pie chart shows the results.

a. Write down the type of film that is the mode. (1)

b. What fraction of the people chose Action? (1)

c. Work out the number of people who chose Horror. (2)



(4 marks)

a) the mode has the biggest sector

Comedy

b)

$\frac{90}{360} = \frac{1}{4}$

One quarter chose Action

c) angle for each person

$360 \div 72 = 5^{\circ}$

Horror is 70°

$70 \div 5 = 14$

a) Comedy b) $\frac{1}{4}$ c) 14 people

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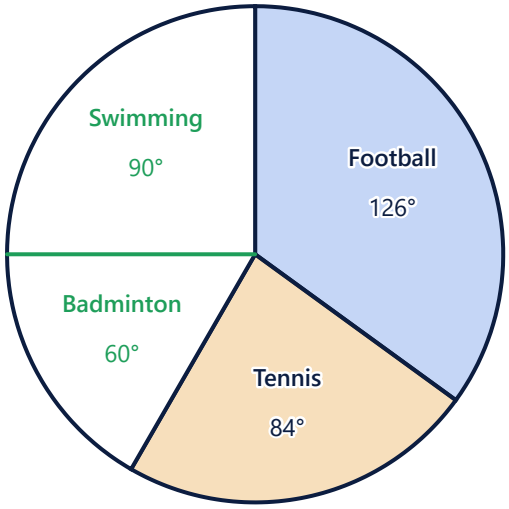
3 60 members of a sports club each chose their favourite sport. Jo starts to draw a pie chart of the results.

The sectors for Football and Tennis have been drawn. 10 members chose Badminton. The rest of the members chose Swimming.

a. Work out the angle of the sector for Badminton. (2)

b. Complete the pie chart. Label each sector. (1)

c. Work out the number of members who chose Football. (1)



(4 marks)

a) angle for each member

$360 \div 60 = 6^\circ$

$10 \times 6 = 60^\circ$

Badminton is 60°

b)

Measure 60° from the edge of the Tennis sector

Draw a line from the centre to the edge

the sector left over is Swimming

$360 - 126 - 84 - 60 = 90^\circ$

Label the two new sectors

c) Football is 126°

$126 \div 6 = 21$

a) 60° b) Badminton 60°, Swimming 90° c) 21 members

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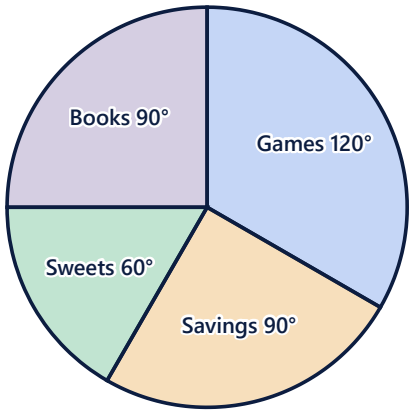
4 The pie chart shows how Dylan spent his birthday money.

Dylan spent £12 on Games.

a. Work out the total amount of birthday money Dylan had. (2)

b. Work out how much Dylan spent on Sweets. (1)

c. Dylan says, "I saved more than a quarter of my money."
Is Dylan correct? Give a reason for your answer. (1)



(4 marks)

a) Games is 120°

$\frac{120}{360} = \frac{1}{3}$

one third of the money is £12

$3 \times 12 = 36$

total = £36

b) Sweets is 60°, half of the Games angle

$12 \div 2 = 6$

£6 on Sweets

c) Savings is 90°

$\frac{90}{360} = \frac{1}{4}$

No, he saved exactly a quarter

a) £36 b) £6 c) No, exactly a quarter

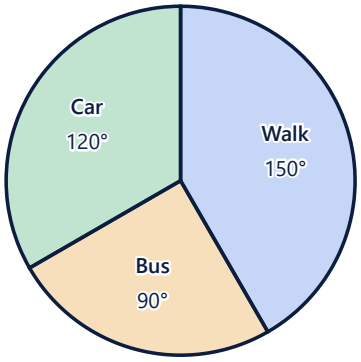
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5 The pie charts show how the pupils at two schools travel to school.

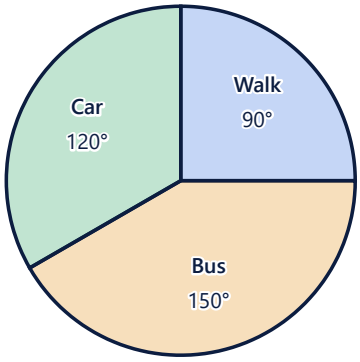
School A has 120 pupils. School B has 360 pupils.

a. Write down the school where a bigger fraction of the pupils walk. (1)

b. Tom says, "More pupils walk to School A than walk to School B because the Walk sector is bigger for School A."
Is Tom correct? You must show your working. (4)



School A (120 pupils)



School B (360 pupils)

(5 marks)

a) the bigger Walk angle

School A, because $150^\circ > 90^\circ$

b) pupils who walk to School A

$$\frac{150}{360} \times 120 = 50$$

pupils who walk to School B

$$\frac{90}{360} \times 360 = 90$$

$90 > 50$

More pupils walk to School B

Tom is not correct

a) School A b) No, 50 at School A and 90 at School B

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