6.6 Pie Charts: 30-minute Pack

Calculators not allowed · about 30 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Pie chart 1 shows the favourite sport of 120 pupils in Class B; the angle for football is 120°. Pie chart 2 shows the favourite sport of 240 pupils in Year 7; the angle for football is 45°.
Work out which group has more pupils who like football.

(3)

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2 A bar chart shows the number of pupils in a class who own each type of pet: dogs 28, cats 14, fish 21, rabbits 30, hamsters 3.
Work out the total number of pets owned.

(2)

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3 A survey of 40 people found 20 prefer tea, 12 prefer coffee and 8 prefer hot chocolate.
What is the angle, in degrees, for the coffee sector in a pie chart?

(1)

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4 Pie chart 1 shows the favourite sport of 180 pupils in Year 8; the angle for football is 60°. Pie chart 2 shows the favourite sport of 60 pupils in Town X; the angle for football is 90°. Work out which group has more pupils who like football.

(3)

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5 In a pie chart of the favourite sports of 20 pupils, the sector for tennis has an angle of 144°. How many pupils chose tennis?

(2)

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6 40 pupils were asked to choose their favourite sport. 12 chose tennis. Work out the angle for tennis in a pie chart.

(2)

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7 A pie chart shows how 180 pupils travel to school. The angle for car is 160° and the angle for train is 110°. How many more pupils travel by car than by train?

(3)

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8 180 pupils were asked to choose their favourite sport. 48 chose football. Work out the angle for football in a pie chart.

(2)

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9 36 pupils chose a favourite sport: netball 4, swimming 10, tennis 22. Work out the three angles needed to draw a pie chart.

(3)

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10 A pie chart shows how 40 pupils get to school. The angle for walking is 27°. What percentage walk? Give your answer to the nearest whole number if needed.

(2)

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11 A pie chart has a sector of 30 degrees representing 'red'. What percentage of the whole does 'red' represent? Give your answer to 1 decimal place.

(2)

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Mark scheme · 6.6 Pie Charts: 30-minute Pack

Question 1

120/360 x 120 = 40	M1
45/360 x 240 = 30	M1
Class B	A1

Answer: **Class B**

Question 2

adds the five values	M1
96 cao	A1

Answer: **96**

Question 3

108 degrees cao	B1

Answer: **108 degrees**

Question 4

60/360 x 180 = 30	M1
90/360 x 60 = 15	M1
Year 8	A1

Answer: **Year 8**

Question 5

144/360 x 20	M1
8 cao	A1

Answer: **8**

Question 6

360 ÷ 40 = 9 per pupil or 12/40 x 360	M1
108° cao	A1

Answer: **108°**

Question 7

180 ÷ 360 per degree or 4/9 x 180	M1
both numbers of pupils found: 80 and 55	M1
25 cao	A1

Answer: **25**

Question 8

360 ÷ 180 = 2 per pupil or 48/180 x 360	M1
96° cao	A1

Answer: **96°**

Question 9

360 ÷ 36 = 10 degrees per pupil	M1
two angles correct	A1
40°, 100°, 220° cao	A1

Answer: **40°, 100°, 220°**

Question 10

27/360	M1
8% cao	A1

Answer: **8%**

Question 11

uses 30/360 × 100 or equivalent method	M1
8.3% (to 1 dp) cao	A1

Answer: **8.3%**

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