6.6 Pie Charts: 1-hour Pack

Calculators not allowed · about 60 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Pie chart 1 shows the favourite sport of 90 pupils in Town Y; the angle for football is 60°.
Pie chart 2 shows the favourite sport of 60 pupils in Class A; the angle for football is 60°.
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 26, cats 21, fish 8, rabbits 16, hamsters 27.
How many more pupils own hamsters than cats?

(2)

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3 A bar chart shows the number of pupils in a class who own each type of pet: dogs 29, cats 16, fish 8, rabbits 23, hamsters 20.
Work out the mean number of pupils per pet type.

(3)

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4 120 pupils were asked to choose their favourite sport. 44 chose football. Work out the angle for football in a pie chart.

(2)

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5 A bar chart shows the number of pupils in a class who own each type of pet: dogs 3, cats 12, fish 26, rabbits 19, hamsters 12.
How many more pupils own rabbits than dogs?

(2)

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6 A pie chart shows how 45 pupils get to school. The angle for walking is 88°. What percentage walk? Give your answer to the nearest whole number if needed.

(2)

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7 A pie chart shows how 60 pupils travel to school. The angle for bus is 180° and the angle for train is 120°. How many more pupils travel by bus than by train?

(3)

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8 A bar chart shows the number of pupils in a class who own each type of pet: dogs 24, cats 21, fish 13, rabbits 30, hamsters 23.
Work out the mean number of pupils per pet type.

(3)

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9 A bar chart shows the number of pupils in a class who own each type of pet: dogs 21, cats 3, fish 3, rabbits 5, hamsters 21.
How many more pupils own rabbits than fish?

(2)

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10 A pie chart shows pupils' favourite sport. The hockey sector is 56 degrees. There are 45 pupils in total. How many pupils chose hockey?

(2)

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11 Pie chart 1 shows the favourite sport of 240 pupils in Town Y; the angle for football is 135°. Pie chart 2 shows the favourite sport of 120 pupils in Year 7; the angle for football is 60°.
Work out which group has more pupils who like football.

(3)

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12 72 pupils chose a favourite sport: athletics 18, hockey 18, tennis 36. Work out the three angles needed to draw a pie chart.

(3)

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13 Pie chart 1 shows the favourite sport of 180 pupils in Class B; the angle for football is 150°. Pie chart 2 shows the favourite sport of 90 pupils in Town X; the angle for football is 60°.
Work out which group has more pupils who like football.

(3)

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14 36 pupils chose a favourite sport: swimming 12, hockey 8, netball 16. Work out the three angles needed to draw a pie chart.

(3)

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15 A pie chart shows how 24 pupils travel to school. The angle for car is 30° and the angle for train is 100°. The only other method is walk. Work out the angle for walk.

(2)

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16 Pie chart 1 shows the favourite sport of 120 pupils in Town X; the angle for football is 150°. Pie chart 2 shows the favourite sport of 90 pupils in Year 8; the angle for football is 120°.
Work out which group has more pupils who like football.

(3)

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17 In a pie chart of the favourite sports of 72 pupils, the sector for hockey has an angle of 100°. How many pupils chose hockey?

(2)

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18 A pie chart shows how 60 pupils travel to school. The angle for car is 150° and the angle for walk is 40°. The only other method is train. Work out the angle for train.

(2)

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19 A pie chart shows modes of travel to school. Car 90 degrees, Bus 72 degrees, Walk 54 degrees. Calculate the angle for the 'Other' category.

(1)

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Mark scheme · 6.6 Pie Charts: 1-hour Pack

Question 1

60/360 x 90 = 15	M1
60/360 x 60 = 10	M1
Town Y	A1

Answer: **Town Y**

Question 2

27 - 21 (or the reverse)	M1
6 cao	A1

Answer: **6**

Question 3

adds the five values	M1
96 ÷ 5	M1
19.2 cao	A1

Answer: **19.2**

Question 4

360 ÷ 120 = 3 per pupil or 44/120 x 360	M1
132° cao	A1

Answer: **132°**

Question 5

19 - 3 (or the reverse)	M1
16 cao	A1

Answer: **16**

Question 6

88/360	M1
24% cao	A1

Answer: **24%**

Question 7

60 ÷ 360 per degree or 0.5 x 60	M1
both numbers of pupils found: 30 and 20	M1
10 cao	A1

Answer: **10**

Question 8

adds the five values	M1
111 ÷ 5	M1
22.2 cao	A1

Answer: **22.2**

Question 9

5 - 3 (or the reverse)	M1
2 cao	A1

Answer: **2**

Question 10

uses 56/360 × 45 or equivalent method	M1
56/360 x 45 = 7 cao	A1

Answer: **7**

Question 11

135/360 x 240 = 90	M1
60/360 x 120 = 20	M1
Town Y	A1

Answer: **Town Y**

Question 12

360 ÷ 72 = 5 degrees per pupil	M1
two angles correct	A1
90°, 90°, 180° cao	A1

Answer: **90°, 90°, 180°**

Question 13

150/360 x 180 = 75	M1
60/360 x 90 = 15	M1
Class B	A1

Answer: **Class B**

Question 14

360 ÷ 36 = 10 degrees per pupil	M1
two angles correct	A1
120°, 80°, 160° cao	A1

Answer: **120°, 80°, 160°**

Question 15

360 - 30 - 100	M1
230° cao	A1

Answer: **230°**

Question 16

150/360 x 120 = 50	M1
120/360 x 90 = 30	M1
Town X	A1

Answer: **Town X**

Question 17

100/360 x 72	M1
20 cao	A1

Answer: **20**

Question 18

360 - 150 - 40	M1
170° cao	A1

Answer: **170°**

Question 19

144 degrees cao	B1

Answer: **144 degrees**

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