9.5 Statistics: Pie Charts and the Mean: 1-hour Pack

Calculators not allowed · about 60 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 The table shows the points scored for four groups.

Bus: 49
Car: 224
Walk: 730
Bike: 528

What is the total for all four groups?

Answer: ___

(1)

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2 Jack records the books read each week over 4 days: 9, 13, 11, 15.

On the next day Jack does 20. What is the mean of all 5 days?

Answer: ___

(2)

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3 A school club survey is shown.

Boys: 28 chose Art, 10 chose Music
Girls: 5 chose Art, 29 chose Music

How many pupils were surveyed altogether?

Answer: ___

(3)

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4 A school club survey is shown.

Boys: 6 chose Art, 30 chose Music
Girls: 23 chose Art, 30 chose Music

How many pupils were surveyed altogether?

Answer: ___

(3)

---

5 The mean of 4 numbers is 8. 3 of the numbers are 5, 9, 12.

What is the other number?

Answer: ___

(2)

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6 A pie chart for 50 pupils shows: football 144 degrees, netball 90 degrees and other activities 54 degrees. What angle should represent running if these are the only categories?

(2)

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7 A teacher recorded these test scores for a group of 10 children: 2, 3, 3, 4, 5, 5, 6, 6, 7, 8. Calculate the mean test score. Give your answer to one decimal place if needed.

(2)

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8 A line graph shows the number of visitors to a museum each day: Monday 30, Tuesday 45, Wednesday 50, Thursday 35, Friday 40. Calculate the mean number of visitors for the five days.

(2)

---

9 Here are 7 heights in cm: 53, 60, 24, 8, 46, 4, 4.

What is the range?

Answer: ___ cm

(1)

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10 A pie chart shows how 20 children answered a survey. The sector for those who walk to school has an angle of 180 degrees.

How many children walk to school?

Answer: ___

(2)

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11 A pie chart shows how 30 customers answered a survey. The sector for those who bought a sandwich has an angle of 240 degrees.

How many customers bought a sandwich?

Answer: ___

(2)

---

12 In a class of 30 pupils, 13 like swimming, 14 like cycling and 12 like both.

How many pupils like neither?

Answer: ___

(2)

---

13 Here are 6 heights in cm: 16, 15, 5, 29, 10, 38.

What is the range?

Answer: ___ cm

(1)

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14 Here are 7 ages of children in a team: 22, 25, 22, 32, 25, 22, 20.

What is the mean?

Answer: ___

(2)

---

15 30 customers answered a survey. 23 of them bought a sandwich. In a pie chart this is shown as a sector.

What is the angle of the sector?

Answer: ___ degrees

(2)

---

16 A survey of 60 children recorded favourite fruits. The pie chart shows apples 120 degrees, bananas 90 degrees. How many children chose bananas?

(2)

---

17 90 customers answered a survey. 44 of them bought a sandwich. In a pie chart this is shown as a sector.

What is the angle of the sector?

Answer: ___ degrees

(2)

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18 In a class of 28 pupils, 21 like art, 16 like music and 10 like both.

How many pupils like neither?

Answer: ___

(2)

---

19 Ravi records the points scored in a game each round over 3 days: 13, 8, 12.

On the next day Ravi does 17. What is the mean of all 4 days?

Answer: ___

(2)

---

20 Priya records the books read each week over 4 days: 22, 24, 22, 28.

On the next day Priya does 32. What is the mean of all 5 days?

Answer: ___

(2)

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21 A line graph shows the height of a plant in cm at different times. The points on the graph are: 8:00 = 18, 9:00 = 18, 10:00 = 21, 11:00 = 23, 12:00 = 28, 13:00 = 30.

What was the value at 10:00?

Answer: ___ cm

(1)

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22 In a class of 31 pupils, 20 like cheese, 14 like ham and 12 like both.

How many pupils like neither?

Answer: ___

(2)

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23 A school club survey is shown.

Boys: 9 chose Art, 24 chose Music
Girls: 15 chose Art, 16 chose Music

How many boys were surveyed?

Answer: ___

(2)

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24 Here are 6 number of goals scored: 36, 36, 49, 36, 37, 34.

What is the mean?

Answer: ___

(2)

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25 A line graph shows the height of a plant in cm at different times. The points on the graph are: 8:00 = 9, 9:00 = 15, 10:00 = 12, 11:00 = 16, 12:00 = 18, 13:00 = 22.

Between which two consecutive times was the greatest increase? Write the earlier time.

Answer: ___

(2)

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Mark scheme · 9.5 Statistics: Pie Charts and the Mean: 1-hour Pack

A correct answer earns full marks unless the question asks for working, a method, proof or explanation.

Question 1

1,531 cao	B1

Answer: **1,531**

Question 2

total 68 seen	M1
13.6 cao	A1

Answer: **13.6**

Question 3

adds the boys	M1
adds all four	M1
72 cao	A1

Answer: **72**

Question 4

adds the boys	M1
adds all four	M1
89 cao	A1

Answer: **89**

Question 5

8 x 4 = 32 seen	M1
6 cao	A1

Answer: **6**

Question 6

Sum of given angles found: 144 + 90 + 54 = 288	M1
72 degrees cao	A1

Answer: **72**

Question 7

Sum and division shown: (2+3+3+4+5+5+6+6+7+8) / 10	M1
4.9 cao	A1

Answer: **4.9**

Question 8

Sum and division shown: (30+45+50+35+40) / 5	M1
40 cao	A1

Answer: **40**

Question 9

56 cm cao	B1

Answer: **56 cm**

Question 10

angle as a fraction of 360	M1
10 cao	A1

Answer: **10**

Question 11

angle as a fraction of 360	M1
20 cao	A1

Answer: **20**

Question 12

13 + 14 - 12 = 15 seen	M1
15 cao	A1

Answer: **15**

Question 13

33 cm cao	B1

Answer: **33 cm**

Question 14

168 seen	M1
24 cao	A1

Answer: **24**

Question 15

360 divided by the total	M1
276 degrees cao	A1

Answer: **276 degrees**

Question 16

90/360 x 60 seen	M1
15 cao	A1

Answer: **15**

Question 17

360 divided by the total	M1
176 degrees cao	A1

Answer: **176 degrees**

Question 18

21 + 16 - 10 = 27 seen	M1
1 cao	A1

Answer: **1**

Question 19

total 50 seen	M1
12.5 cao	A1

Answer: **12.5**

Question 20

total 128 seen	M1
25.6 cao	A1

Answer: **25.6**

Question 21

21 cm cao	B1

Answer: **21 cm**

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Question 22

20 + 14 - 12 = 22 seen	**M1**
9 cao	**A1**

Answer: **9**

Question 23

adds both boys' values	**M1**
33 cao	**A1**

Answer: **33**

Question 24

228 seen	**M1**
38 cao	**A1**

Answer: **38**

Question 25

compares the changes	**M1**
8:00 cao	**A1**

Answer: **8:00**

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