9.1 Reasoning: Statistics: 1-hour Pack

STA NC-KS2-MA-STATS · Calculators not allowed · about 60 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 40 pupils answered a survey. 8 of them voted for football. In a pie chart this is shown as a sector.

What is the angle of the sector?

Answer: ___ degrees

(2)

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2 A garden centre recorded the number of packets of seeds sold each month. The total for the four months shown was 210 packets.

March 45 | April 62 | May x | June 58

(a) Work out the number of packets sold in May. **(2)**

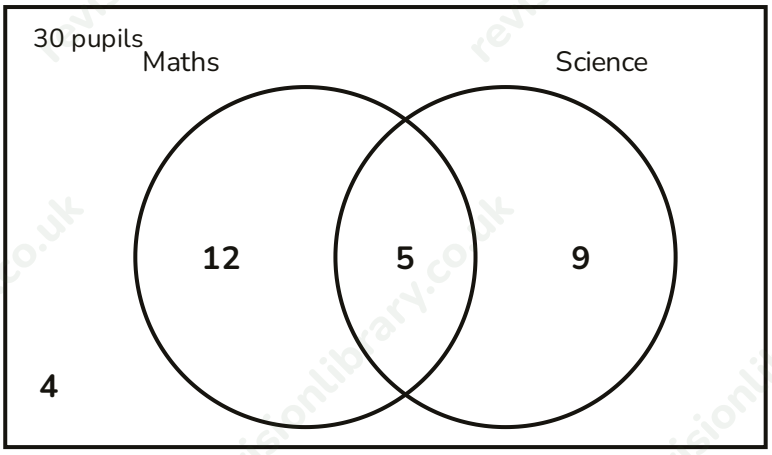
.....

(b) Which month had the highest sales? **(1)**

.....

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3 In a survey of 30 pupils, 12 said they like Maths only, 9 said they like Science only, and 5 said they like both Maths and Science.



(a) How many pupils like neither Maths nor Science? **(1)**

.....

(b) How many pupils like Maths altogether (Maths only, plus both)? **(2)**

.....

4 The table shows the number of books borrowed for four groups.

Bus: 218
Car: 820
Walk: 362
Bike: 311

How many books were there for Car?

Answer: ___

(1)

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

How many children walk to school?

Answer: ___

(2)

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6 Part of a train timetable is shown.

Fenwick: 13:55
Ashby: 14:03
Hollin: 14:28
Dunmere: 14:39

Oscar arrives at Fenwick station at 13:36.

How many minutes must they wait for the train?

Answer: ___ minutes

(2)

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7 The table shows the points scored for four groups.

North: 277
South: 500
East: 438
West: 477

How many more points were there for South than for North?

Answer: ___

(2)

---

8 The mean mark of 5 pupils in a test is 34.

What is the total of their marks?

Answer: ___

(1)

---

9 A pie chart shows how 20 pupils answered a survey. The sector for those who voted for football has an angle of 270 degrees.

How many pupils voted for football?

Answer: ___

(2)

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10 A pictogram uses (*) for 10 items and (half) for 5 items.

Red: (*) (*) (*) (half)
Blue: (*) (*) (*)
Green: (*) (half)

How many more items does Red show than Green?

Answer: ___

(3)

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11 A pie chart shows how 120 people answered a survey. The sector for those who chose tea has an angle of 255 degrees.

How many people chose tea?

Answer: ___

(2)

---

12 A line graph shows the temperature in degrees Celsius at different times. The points on the graph are: 8:00 = 7, 9:00 = 10, 10:00 = 11, 11:00 = 12, 12:00 = 11, 13:00 = 14.

At what time was the value highest?

Answer: ___

(1)

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13 A school club survey is shown.

Boys: 16 chose Swimming, 18 chose Tennis
Girls: 23 chose Swimming, 17 chose Tennis

How many more pupils chose Swimming than Tennis?

Answer: ___

(2)

---

14 The table shows the number of visitors for four groups.

Mon: 35
Tue: 77
Wed: 47
Thu: 34

How many visitors were there for Mon and Tue together?

Answer: ___

(2)

---

15 45 people answered a survey. 36 of them chose tea. In a pie chart this is shown as a sector.

What is the angle of the sector?

Answer: ___ degrees

(2)

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16 20 children answered a survey. 9 of them walk to school. In a pie chart this is shown as a sector.

What is the angle of the sector?

Answer: ___ degrees

(2)

---

17 A pictogram uses (*) for 4 items and (half) for 2 items.

Cats: (*) (*) (*) (*)
Dogs: (*) (*) (*) (*) (half)
Fish: (*) (*) (*) (*) (*)

How many more items does Dogs show than Cats?

Answer: ___

(3)

---

18 The table shows the number of visitors for four groups.

Mon: 57
Tue: 19
Wed: 53
Thu: 66

How many visitors were there for Tue?

Answer: ___

(1)

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19 In a class of 28 pupils, 18 like football, 21 like netball and 16 like both.

How many pupils like neither?

Answer: ___

(2)

---

20 A line graph shows the height of a plant in cm at different times. The points on the graph are: 8:00 = 8, 9:00 = 12, 10:00 = 14, 11:00 = 17, 12:00 = 15, 13:00 = 16.

What was the value at 8:00?

Answer: ___ cm

(1)

---

21 The table shows the number of visitors for four groups.

Year 3: 32
Year 4: 52
Year 5: 46
Year 6: 59

How many visitors were there for Year 4?

Answer: ___

(1)

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22 A line graph shows the water in a tank in litres at different times. The points on the graph are: 8:00 = 18, 9:00 = 21, 10:00 = 21, 11:00 = 27, 12:00 = 29, 13:00 = 27.

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

Answer: ___

(2)

---

23 Uma records the points scored in a game each round over 4 days: 9, 9, 9, 17.

On the next day Uma does 19. What is the mean of all 5 days?

Answer: ___

(2)

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24 A line graph shows the temperature in degrees Celsius at different times. The points on the graph are: 8:00 = 18, 9:00 = 15, 10:00 = 14, 11:00 = 17, 12:00 = 18, 13:00 = 17.

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

Answer: ___

(2)

---

25 The mean of 6 numbers is 22. 5 of the numbers are 25, 24, 19, 19, 20.

What is the other number?

Answer: ___

(2)

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Mark scheme · 9.1 Reasoning: Statistics: 1-hour Pack

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

Question 1

360 divided by the total	M1
72 degrees cao	A1

Answer: **72 degrees**

Question 2

(a) 45 + 62 + 58 = 165 seen	M1
(a) 45 packets cao	A1

(a) Answer: **45 packets**

(b) April cao, ft from part (a)	B1

(b) Answer: **April**

Question 3

(a) 4 cao	B1

(a) Answer: **4 pupils**

(b) 12 + 5 seen	M1
(b) 17 pupils cao	A1

(b) Answer: **17 pupils**

Question 4

820 cao	B1

Answer: **820**

Question 5

angle as a fraction of 360	M1
5 cao	A1

Answer: **5**

Question 6

finds the wait between arriving and the departure time (counting on or subtracting)	M1
19 minutes cao	A1

Answer: **19 minutes**

Question 7

subtraction seen	M1
223 cao	A1

Answer: **223**

Question 8

170 cao	B1

Answer: **170**

Question 9

angle as a fraction of 360	M1
15 cao	A1

Answer: **15**

Question 10

uses the key	M1
subtracts	M1
20 cao	A1

Answer: **20**

Question 11

angle as a fraction of 360	M1
85 cao	A1

Answer: **85**

Question 12

13:00 cao	B1

Answer: **13:00**

Question 13

both totals found	M1
4 cao	A1

Answer: **4**

Question 14

addition seen	M1
112 cao	A1

Answer: **112**

Question 15

360 divided by the total	M1
288 degrees cao	A1

Answer: **288 degrees**

Question 16

360 divided by the total	M1
162 degrees cao	A1

Answer: **162 degrees**

Question 17

uses the key	M1
subtracts	M1
2 cao	A1

Answer: **2**

Question 18

19 cao	B1

Answer: **19**

Question 19

18 + 21 - 16 = 23 seen	M1
5 cao	A1

Answer: **5**

Question 20

8 cm cao	B1

Answer: **8 cm**

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Question 21

52 cao	**B1**

Answer: **52**

Question 22

compares the changes	**M1**
10:00 cao	**A1**

Answer: **10:00**

Question 23

total 63 seen	**M1**
12.6 cao	**A1**

Answer: **12.6**

Question 24

compares the changes	**M1**
10:00 cao	**A1**

Answer: **10:00**

Question 25

22 x 6 = 132 seen	**M1**
25 cao	**A1**

Answer: **25**

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