6.3 Bar Charts, Pictograms and Line Graphs: 1-hour Pack

Calculators not allowed · about 60 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 A line graph shows the temperature in a greenhouse: 6:00 12°C, 8:00 10°C, 10:00 9°C, 12:00 14°C, 14:00 18°C.
Work out the change in temperature between 10:00 and 14:00.

(2)

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2 A line graph shows the temperature in a greenhouse: 6:00 8°C, 8:00 9°C, 10:00 11°C, 12:00 15°C, 14:00 13°C.
Work out the change in temperature between 10:00 and 14:00.

(2)

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3 A pictogram uses one symbol to represent 2 bottles of water sold. The pictogram shows: Monday 1 symbols; Tuesday 4 symbols; Wednesday 2.5 symbols; Thursday 3.5 symbols.
How many more bottles were sold on Tuesday than on Thursday?

(2)

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4 A bar chart shows the number of pupils in a class who own each type of pet: dogs 24, cats 4, fish 11, rabbits 27, hamsters 17.
Which type of pet is the mode, and what fraction of all the pets is it? Give the fraction in its simplest form.

(2)

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5 A bar chart shows the number of pupils in a class who own each type of pet: dogs 5, cats 16, fish 18, rabbits 19, hamsters 26.
Work out the mean number of pupils per pet type.

(3)

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6 A bar chart shows the number of pupils in a class who own each type of pet: dogs 8, cats 26, fish 27, rabbits 20, hamsters 15.
How many more pupils own fish than rabbits?

(2)

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7 A line graph shows the temperature in a greenhouse: 9:00 13°C, 11:00 14°C, 13:00 16°C, 15:00 12°C, 17:00 18°C.
Estimate the temperature at 14:00, halfway between the readings at 13:00 and 15:00.

(2)

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8 A bar chart shows the number of pupils in a class who own each type of pet: dogs 21, cats 27, fish 22, rabbits 7, hamsters 16.
How many more pupils own fish than hamsters?

(2)

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9 A line graph shows the temperature in a greenhouse: 6:00 19°C, 8:00 24°C, 10:00 28°C, 12:00 31°C, 14:00 33°C.
Estimate the temperature at 11:00, halfway between the readings at 10:00 and 12:00.

(2)

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10 A pictogram uses one symbol to represent 4 bottles of water sold. The pictogram shows: Monday 1 symbols; Tuesday 1.5 symbols; Wednesday 6.5 symbols; Thursday 4 symbols.
How many more bottles were sold on Thursday than on Tuesday?

(2)

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11 A pictogram uses one symbol to represent 2 bottles of water sold. The pictogram shows: Monday 1.5 symbols; Tuesday 2 symbols; Wednesday 4 symbols; Thursday 4 symbols.
Work out the total number of bottles sold on the four days.

(2)

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12 A pictogram uses one symbol to represent 4 bottles of water sold. The pictogram shows: Monday 4.5 symbols; Tuesday 4.5 symbols; Wednesday 3 symbols; Thursday 4 symbols.
How many bottles were sold on Monday?

(1)

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13 A line graph shows the temperature in a greenhouse: 7:00 7°C, 9:00 10°C, 11:00 14°C, 13:00 12°C, 15:00 9°C.
Estimate the temperature at 10:00, halfway between the readings at 9:00 and 11:00.

(2)

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14 A bar chart shows the number of pupils in a class who own each type of pet: dogs 23, cats 27, fish 7, rabbits 7, hamsters 30.
How many more pupils own cats than dogs?

(2)

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15 A line graph shows the temperature in a greenhouse: 9:00 11°C, 11:00 8°C, 13:00 14°C, 15:00 11°C, 17:00 9°C.
Estimate the temperature at 10:00, halfway between the readings at 9:00 and 11:00.

(2)

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16 A line graph shows the temperature in a greenhouse: 8:00 17°C, 10:00 13°C, 12:00 13°C, 14:00 9°C, 16:00 8°C.
Work out the change in temperature between 12:00 and 16:00.

(2)

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17 A pictogram uses one symbol to represent 4 bottles of water sold. The pictogram shows: Monday 2.5 symbols; Tuesday 4.5 symbols; Wednesday 2 symbols; Thursday 2.5 symbols.
How many more bottles were sold on Tuesday than on Thursday?

(2)

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18 A pictogram uses one symbol to represent 4 bottles of water sold. The pictogram shows: Monday 3 symbols; Tuesday 3 symbols; Wednesday 6.5 symbols; Thursday 4.5 symbols.
How many bottles were sold on Monday?

(1)

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19 A pictogram uses one symbol to represent 2 bottles of water sold. The pictogram shows: Monday 2 symbols; Tuesday 3 symbols; Wednesday 1 symbols; Thursday 6.5 symbols.
How many more bottles were sold on Thursday than on Tuesday?

(2)

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20 A bar chart shows the number of pupils in a class who own each type of pet: dogs 17, cats 5, fish 20, rabbits 9, hamsters 19.
How many more pupils own hamsters than rabbits?

(2)

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21 A line graph shows the temperature in a greenhouse: 9:00 17°C, 11:00 15°C, 13:00 12°C, 15:00 11°C, 17:00 13°C.
Estimate the temperature at 12:00, halfway between the readings at 11:00 and 13:00.

(2)

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22 A line graph shows the temperature in a greenhouse: 7:00 23°C, 9:00 28°C, 11:00 33°C, 13:00 32°C, 15:00 34°C.
At what time was the temperature highest, and what was the highest temperature?

(2)

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23 A bar chart shows the number of pupils in a class who own each type of pet: dogs 14, cats 14, fish 28, rabbits 17, hamsters 14.
Which type of pet is the mode, and what fraction of all the pets is it? Give the fraction in its simplest form.

(2)

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24 A pictogram shows that 4 symbols represent 8 apples. How many apples does 1 symbol represent? Use your answer to find how many apples are shown by 7 symbols.

(2)

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Mark scheme · 6.3 Bar Charts, Pictograms and Line Graphs: 1-hour Pack

Question 1

18 - 9	M1
+9°C cao	A1

Answer: **9°C rise**

Question 2

13 - 11	M1
+2°C cao	A1

Answer: **2°C rise**

Question 3

subtracts the two values	M1
1 cao	A1

Answer: **1**

Question 4

mode = rabbits	B1
27/83	B1

Answer: **rabbits, 27/83**

Question 5

adds the five values	M1
84 ÷ 5	M1
16.8 cao	A1

Answer: **16.8**

Question 6

27 - 20 (or the reverse)	M1
7 cao	A1

Answer: **7**

Question 7

uses the midpoint of the two readings	M1
14°C cao	A1

Answer: **14°C**

Question 8

22 - 16 (or the reverse)	M1
6 cao	A1

Answer: **6**

Question 9

uses the midpoint of the two readings	M1
29.5°C cao	A1

Answer: **29.5°C**

Question 10

subtracts the two values	M1
10 cao	A1

Answer: **10**

Question 11

adds the symbols or the values	M1
23 cao	A1

Answer: **23**

Question 12

18 cao	B1

Answer: **18**

Question 13

uses the midpoint of the two readings	M1
12°C cao	A1

Answer: **12°C**

Question 14

27 - 23 (or the reverse)	M1
4 cao	A1

Answer: **4**

Question 15

uses the midpoint of the two readings	M1
9.5°C cao	A1

Answer: **9.5°C**

Question 16

8 - 13	M1
-5°C cao	A1

Answer: **5°C fall**

Question 17

subtracts the two values	M1
8 cao	A1

Answer: **8**

Question 18

12 cao	B1

Answer: **12**

Question 19

subtracts the two values	M1
7 cao	A1

Answer: **7**

Question 20

19 - 9 (or the reverse)	M1
10 cao	A1

Answer: **10**

Question 21

uses the midpoint of the two readings	M1
13.5°C cao	A1

Answer: **13.5°C**

Question 22

15:00	B1
34°C	B1

Answer: **15:00, 34°C**

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Question 23

mode = fish	**B1**
28/87	**B1**

Answer: **fish, 28/87**

Question 24

method: 8 divided by 4 = 2 apples per symbol	**M1**
7 symbols represent 14 apples cao	**A1**

Answer: **2 apples per symbol; 7 symbols = 14 apples**

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