6.3 Bar Charts, Pictograms and Line Graphs: 30-minute Pack

Calculators not allowed · about 30 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 A line graph shows the temperature in a greenhouse: 7:00 10°C, 9:00 8°C, 11:00 11°C, 13:00 7°C, 15:00 3°C.
Work out the change in temperature between 7:00 and 11:00.

(2)

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2 A bar chart shows the number of pupils in a class who own each type of pet: dogs 20, cats 14, fish 7, rabbits 15, hamsters 25.
How many more pupils own rabbits than fish?

(2)

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3 A line graph shows the temperature in a greenhouse: 6:00 6°C, 8:00 11°C, 10:00 11°C, 12:00 15°C, 14:00 20°C.
At what time was the temperature highest, and what was the highest temperature?

(2)

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4 A bar chart shows the number of pupils in a class who own each type of pet: dogs 17, cats 8, fish 14, rabbits 3, hamsters 7.
How many more pupils own hamsters than rabbits?

(2)

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5 A line graph tracks the number of visitors to a museum over 4 hours: 10:00 - 20, 11:00 - 35, 12:00 - 50, 13:00 - 30. Between which two consecutive hours did the number of visitors decrease, and by how much?

(3)

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6 A bar chart shows the number of goals scored by four football teams in a season: Reds 18, Blues 24, Greens 12, Yellows 30. Which team scored the fewest goals, and what fraction of the total goals scored by all four teams did they score? Give your answer in simplest form.

(3)

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7 A line graph shows the distance a cyclist has travelled: at 0 minutes the distance is 0 km, and at 20 minutes the distance is 5 km. Assuming a constant speed shown by a straight line, what distance had the cyclist travelled after 12 minutes?

(3)

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8 Stretch question. A pictogram shows sales of umbrellas over 4 days using a symbol worth 6 umbrellas: Monday 2 symbols, Tuesday 3 and a half symbols, Wednesday 1 symbol, Thursday 4 symbols. Work out the number of umbrellas sold each day, the total sold over the 4 days, and, if Friday's sales were double Thursday's, how many umbrellas were sold on Friday.

(4)

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9 A bar chart shows the number of pupils in a class who own each type of pet: dogs 15, cats 15, fish 24, rabbits 6, hamsters 13.
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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10 A pictogram uses one symbol to represent 10 bottles of water sold. The pictogram shows: Monday 4 symbols; Tuesday 2.5 symbols; Wednesday 6 symbols; Thursday 2.5 symbols.
Work out the total number of bottles sold on the four days.

(2)

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Mark scheme · 6.3 Bar Charts, Pictograms and Line Graphs: 30-minute Pack

Question 1

11 - 10	M1
+1°C cao	A1

Answer: **1°C rise**

Question 2

15 - 7 (or the reverse)	M1
8 cao	A1

Answer: **8**

Question 3

14:00	B1
20°C	B1

Answer: **14:00, 20°C**

Question 4

7 - 3 (or the reverse)	M1
4 cao	A1

Answer: **4**

Question 5

finds the change between each consecutive pair of hours	M1
identifies 12:00 to 13:00 as the only decrease	M1
decrease of 20 visitors cao	A1

Answer: **12:00 to 13:00; decrease of 20 visitors**

Question 6

identifies Greens as fewest with 12 goals	M1
method: total goals = 18 + 24 + 12 + 30 = 84 and forms fraction 12/84	M1
1/7 cao	A1

Answer: **Greens; 1/7**

Question 7

method: rate = 5 km / 20 min = 0.25 km per minute	M1
method: 0.25 x 12 shown	M1
3 km cao	A1

Answer: **3 km**

Question 8

correct daily totals: Monday 12, Tuesday 21, Wednesday 6, Thursday 24	M1
total over 4 days = 63	M1
method: Friday = 2 x 24 shown	M1
Friday = 48 umbrellas cao	A1

Answer: **Daily: Mon 12, Tue 21, Wed 6, Thu 24; total 63; Friday 48**

Question 9

mode = fish	B1
24/73	B1

Answer: **fish, 24/73**

Question 10

adds the symbols or the values	M1
150 cao	A1

Answer: **150**

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