6.2 Collecting Data, Tally and Frequency Tables: 30-minute Pack

Calculators not allowed · about 30 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 A teacher grouped ages of 20 pupils into 5-year intervals: 5-9, 10-14, 15-19. The frequencies are 7, 11, 2. Draw a simple bar chart sketch (bars labelled by group) showing these frequencies and state one conclusion you can make about the ages in the class.

(a) Sketch a bar chart with correct heights for each group (no need for exact scale). **(2)**

(b) State one conclusion from the bar chart. **(2)**

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2 A class records the number of pets each pupil has: 0, 1, 2, 1, 3, 0, 1. Complete a tally chart and write the frequency for each category 0, 1, 2, 3.

(a) Fill in the tally and frequency for 0, 1, 2, 3 pets. **(2)**

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3 A tally chart shows how pupils travel to school. bus: 4 groups of five and 2 more; car: 2 groups of five and 4 more; bike: 2 groups of five and 0 more; walk: 1 group of five and 0 more.
Which method of travel is the mode, and how many pupils is that?

(2)

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4 The scores of 12 players in a game are: 31, 37, 33, 35, 30, 33, 44, 30, 32, 32, 30, 44.
Complete a grouped frequency table using the class intervals 30 to 34, 35 to 39 and 40 to 44.

(3)

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5 A tally chart shows how pupils travel to school. bus: 3 groups of five and 0 more; car: 5 groups of five and 1 more; bike: 2 groups of five and 3 more; walk: 4 groups of five and 1 more.
Write the frequency for each method of travel.

(2)

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6 A tally chart shows how pupils travel to school. bus: 3 groups of five and 0 more; car: 1 group of five and 0 more; bike: 3 groups of five and 2 more; walk: 2 groups of five and 1 more.
Which method of travel is the mode, and how many pupils is that?

(2)

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7 The numbers of pets owned by 21 pupils are: 8, 8, 5, 7, 6, 7, 8, 5, 4, 8, 5, 8, 6, 6, 4, 4, 8, 7, 5, 7, 8.
What fraction of the pupils own exactly 5 pets? Give your answer in its simplest form.

(2)

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8 The scores of 20 players in a game are: 19, 12, 10, 34, 12, 23, 36, 10, 22, 15, 24, 25, 12, 12, 23, 34, 35, 32, 14, 10.
Complete a grouped frequency table using the class intervals 10 to 19, 20 to 29 and 30 to 39.

(3)

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9 A tally chart shows how pupils travel to school. bus: 5 groups of five and 1 more; car: 6 groups of five and 3 more; bike: 1 group of five and 3 more; walk: 1 group of five and 0 more.
Which method of travel is the mode, and how many pupils is that?

(2)

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10 The scores of 12 players in a game are: 17, 10, 25, 1, 5, 24, 4, 6, 28, 2, 29, 28.
Complete a grouped frequency table using the class intervals 0 to 9, 10 to 19 and 20 to 29.

(3)

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Mark scheme · 6.2 Collecting Data, Tally and Frequency Tables: 30-minute Pack

Question 1

(a) bars labelled and roughly proportional: heights showing 7, 11, 2	M1
(a) bars ordered by groups and heights clear	A1

(a) Answer: **Bar heights: 5-9 -> 7, 10-14 -> 11, 15-19 -> 2**

(b) conclusion that refers to the data, e.g. most pupils are in 10-14 group	M1
(b) conclusion stated clearly e.g. majority are aged 10-14 cao	A1

(b) Answer: **Most pupils are in the 10-14 age group**

Question 2

(a) correct tallies shown: 0 -> ||, 1 -> |||, 2 -> |, 3 -> |	M1
(a) frequencies 0:2, 1:3, 2:1, 3:1 cao	A1

(a) Answer: **0: tally || frequency 2; 1: tally ||| frequency 3; 2: tally | frequency 1; 3: tally | frequency 1**

Question 3

bus	B1
22	B1

Answer: **bus, 22**

Question 4

tally or count of at least one class	M1
two frequencies correct	A1
30 to 34: 8, 35 to 39: 2, 40 to 44: 2 cao	A1

Answer: **30 to 34: 8, 35 to 39: 2, 40 to 44: 2**

Question 5

at least two frequencies correct	M1
bus 15, car 26, bike 13, walk 21 cao	A1

Answer: **bus 15, car 26, bike 13, walk 21**

Question 6

bike	B1
17	B1

Answer: **bike, 17**

Question 7

frequency 4 found	M1
4/21 cao	A1

Answer: **4/21**

Question 8

tally or count of at least one class	M1
two frequencies correct	A1
10 to 19: 10, 20 to 29: 5, 30 to 39: 5 cao	A1

Answer: **10 to 19: 10, 20 to 29: 5, 30 to 39: 5**

Question 9

car	B1
33	B1

Answer: **car, 33**

Question 10

tally or count of at least one class	M1
two frequencies correct	A1
0 to 9: 5, 10 to 19: 2, 20 to 29: 5 cao	A1

Answer: **0 to 9: 5, 10 to 19: 2, 20 to 29: 5**

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