1.9 The Statistical Enquiry Cycle: 1-hour Pack

Total Marks

EDEXCEL 1ST0 · Calculator allowed · about 60 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 A hypothesis is a testable statement. For each item, write down whether it is a hypothesis, Yes or No.

(a) Is exercise good for you?

(b) Collect the heights of 30 pupils

(c) Do pupils like pizza?

(d) People who sleep longer get higher test marks

(Total for Question 1 is 4 marks)

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2 74 people were asked a question. The two-way table is partly complete.

	walk	do not walk	Total
boys	?	18	35
girls	?	34	39
Total	22	52	74

Work out the missing values (shown as ?). Give them in the order they appear, reading across the rows.

(Total for Question 2 is 3 marks)

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3 A hypothesis is a testable statement. For each item, write down whether it is a hypothesis, Yes or No.

(a) Collect the heights of 30 pupils

(b) Do pupils like pizza?

(c) Is exercise good for you?

(d) Plants given fertiliser grow taller on average than plants without fertiliser

(Total for Question 3 is 4 marks)

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4 81 people were asked a question. The two-way table is partly complete.

	own a phone	do not own a phone	Total
adults	16	32	48
children	?	?	33
Total	38	43	81

Work out the missing values (shown as ?). Give them in the order they appear, reading across the rows.

(Total for Question 4 is 3 marks)

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5 For each situation, write down whether the data is primary or secondary.

(a) a student uses data collected by a different class last year

(b) a researcher interviews shoppers about their habits

(c) a student copies data from a newspaper report

(d) a teacher gives pupils a reaction-time experiment

(Total for Question 5 is 4 marks)

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6 A hypothesis is a testable statement. For each item, write down whether it is a hypothesis, Yes or No.

(a) Boys run faster than girls over 100 metres

(b) Plants given fertiliser grow taller on average than plants without fertiliser

(c) How tall are the plants?

(d) Draw a bar chart of the results

(Total for Question 6 is 4 marks)

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7 For each situation, write down whether the data is primary or secondary.

(a) a student uses data collected by a different class last year

(b) a student copies data from a newspaper report

(c) a teacher gives pupils a reaction-time experiment

(d) a student uses weather records from an official website

(Total for Question 7 is 4 marks)

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8 121 people were asked a question. The two-way table is partly complete.

	like fruit	do not like fruit	Total
boys	?	?	74
girls	27	20	47
Total	63	58	121

Work out the missing values (shown as ?). Give them in the order they appear, reading across the rows.

(Total for Question 8 is 3 marks)

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9 A hypothesis is a testable statement. For each item, write down whether it is a hypothesis, Yes or No.

(a) Do pupils like pizza?

(b) Plants given fertiliser grow taller on average than plants without fertiliser

(c) Draw a bar chart of the results

(d) Collect the heights of 30 pupils

(Total for Question 9 is 4 marks)

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10 114 people were asked a question. The two-way table is partly complete.

	own a phone	do not own a phone	Total
adults	29	?	66
children	18	?	48
Total	47	67	114

Work out the missing values (shown as ?). Give them in the order they appear, reading across the rows.

(Total for Question 10 is 3 marks)

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11 For each situation, write down whether the data is primary or secondary.

(a) a group counts cars passing the school gate

(b) a student uses data collected by a different class last year

(c) a student reads sales figures from a company annual report

(d) a council publishes census tables that a student downloads

(Total for Question 11 is 4 marks)

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12 The statistical enquiry cycle has four stages: plan, collect data, process and represent data, interpret and discuss results. For each activity, write down the stage it belongs to.

(a) drawing a scatter graph

(b) suggesting how the enquiry could be improved

(c) explaining a limitation of the results

(Total for Question 12 is 3 marks)

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13 For each situation, write down whether the data is primary or secondary.

(a) a teacher gives pupils a reaction-time experiment

(b) a student reads sales figures from a company annual report

(c) a pupil measures the heights of classmates with a ruler

(d) a council publishes census tables that a student downloads

(Total for Question 13 is 4 marks)

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14 A hypothesis is a testable statement. For each item, write down whether it is a hypothesis, Yes or No.

(a) How tall are the plants?

(b) Plants given fertiliser grow taller on average than plants without fertiliser

(c) Collect the heights of 30 pupils

(d) Boys run faster than girls over 100 metres

(Total for Question 14 is 4 marks)

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15 49 people were asked a question. The two-way table is partly complete.

	walk	do not walk	Total
Year 10	4	?	9
Year 11	11	?	40
Total	15	34	49

Work out the missing values (shown as ?). Give them in the order they appear, reading across the rows.

(Total for Question 15 is 3 marks)

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16 The statistical enquiry cycle has four stages: plan, collect data, process and represent data, interpret and discuss results. For each activity, write down the stage it belongs to.

(a) describing a trend shown on a graph

(b) calculating the mean and range

(c) using an observation sheet at a bus stop

(d) drawing a scatter graph

(Total for Question 16 is 4 marks)

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Mark scheme · 1.9 The Statistical Enquiry Cycle: 1-hour Pack

Question 1

No	B1
No	B1
No	B1
Yes	B1

Answer: (a) No; (b) No; (c) No; (d) Yes

Question 2

uses a row or column total minus a known value	M1
first missing value correct	A1
second missing value correct	A1

Answer: 17, 5

Question 3

No	B1
No	B1
No	B1
Yes	B1

Answer: (a) No; (b) No; (c) No; (d) Yes

Question 4

uses a row or column total minus a known value	M1
first missing value correct	A1
second missing value correct	A1

Answer: 22, 11

Question 5

secondary	B1
primary	B1
secondary	B1
primary	B1

Answer: (a) secondary; (b) primary; (c) secondary; (d) primary

Question 6

Yes	B1
Yes	B1
No	B1
No	B1

Answer: (a) Yes; (b) Yes; (c) No; (d) No

Question 7

secondary	B1
secondary	B1
primary	B1
secondary	B1

Answer: (a) secondary; (b) secondary; (c) primary; (d) secondary

Question 8

uses a row or column total minus a known value	M1
first missing value correct	A1
second missing value correct	A1

Answer: 36, 38

Question 9

No	B1
Yes	B1
No	B1
No	B1

Answer: (a) No; (b) Yes; (c) No; (d) No

Question 10

uses a row or column total minus a known value	M1
first missing value correct	A1
second missing value correct	A1

Answer: 37, 30

Question 11

primary	B1
secondary	B1
secondary	B1
secondary	B1

Answer: (a) primary; (b) secondary; (c) secondary; (d) secondary

Question 12

process and represent data	B1
interpret and discuss results	B1
interpret and discuss results	B1

Answer: (a) process and represent data; (b) interpret and discuss results; (c) interpret and discuss results

Question 13

primary	B1
secondary	B1
primary	B1
secondary	B1

Answer: (a) primary; (b) secondary; (c) primary; (d) secondary

Question 14

No	B1
Yes	B1
No	B1
Yes	B1

Answer: (a) No; (b) Yes; (c) No; (d) Yes

Question 15

uses a row or column total minus a known value	M1
first missing value correct	A1
second missing value correct	A1

Answer: 5, 29

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Question 16

interpret and discuss results	**B1**
process and represent data	**B1**
collect data	**B1**
process and represent data	**B1**

Answer: (a) interpret and discuss results; (b) process and represent data; (c) collect data; (d) process and represent data

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