



## GCSE Foundation/Higher 21

*Handling Data*

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Mark scheme



26 minutes



24 marks

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*Sampling and collecting*

- M1.** (a) Interview or questionnaire or (phone / internet / postal) survey or suitable voting method (e.g. everyone presses buttons or uses ballot boxes)  
oe  
B1
- (b) Which (of the routes) do you prefer?  
oe eg accept better for prefer  
B1
- Option A, Option B, don't know  
oe  
B1
- (c)  $0.27 \times 200$   
oe  
M1
- 54  
SC1 146  
A1
- [5]
- M2.** Ticks either box with clear supporting reason for choice  
discrete and explains that money takes exact values  
(eg 1p, 2p ... or eg cannot have half a penny)  
Condone 'whole numbers'  
or  
continuous and explains that situations exist where money can take any value (eg exchange rates  
\$1 = £0.612599 or eg petrol costs  
138.99p per litre)  
B1
- [1]
- M3.** (a)  $80(\%) : 20(\%) (= 4 : 1)$   
or  $\frac{4}{5}$  seen  
oe  
80 to 20  
B1
- (b) Rows/columns for History and not History  
oe  
B1
- Columns/rows for think real and not think real  
oe Allow extra column/row for don't know  
B1

- (c)  $17 : 3 = 5.(...) : 1$  or  $17 \div 3 (= 5.(...))$   
 oe  $(4 : 1 \Rightarrow) 12 : 3$

M1

Yes and 5.(...)

Yes and  $12 : 3$

A1

**Alternative method**

$\frac{17}{20}$  (= 85(%)) or  $85 : 15$

$80\% = \frac{16}{20}$  or  $\frac{17}{20}$  seen

M1

Yes and 85% or Yes and 85 and 80

Yes and  $\frac{17}{20} (>) \frac{16}{20}$

A1

[5]

- M4.** (a) Rows or columns for old and new menu

oe

Tally chart for old menu (oe)

B1

Row(s) or column(s) for responses

oe

Tally chart for old menu (oe)

SC1 if headings all phrased as questions

SC1 Data Collection Sheet for students without reference to food/menu

B1

- (b)  $0.25 \times 78$

oe Including complete build-up

M1

19.5 or 19 or 20

Condone 19.5%

(but Q0 if then compared to 25%)

A1

Valid comparison with "13" (with M1 awarded)

"13" = their  $(91 - 78)$

Q1

**Alternative method 1**

$$\frac{91-78}{78}(\times 100)$$

oe

or 0.17 or 0.167 or 0.166... or  $\frac{1}{6}$ 

M1

16.6... or 16.7 or 17

A1

Valid comparison with 25 (with M1 awarded)

*25 may be implied by answer*

Q1

**Alternative method 2**

$$1.25 \times 78$$

oe

M1

97.5 or 97 or 98

A1

Valid comparison with 91 (with M1 awarded)

*91 may be implied by answer*

Q1

**Alternative method 3**

$$\frac{91}{78}(\times 100)$$

M1

116.6... or 116.7 or 117 or 16.6... or 16.7 or 17

A1

Valid comparison (with M1 awarded)

*Either with 25 (may be implied)**or with 125 as appropriate*

Q1

[5]

**M5.**

(a) (i) Personal question

*oe Sensible suggestion**eg, Irrelevant/rude**eg, Does not mention retirement*

B1

(ii) 51 – 59 omission

*oe Or no instruction to tick a box**or Any sensible answer*

B1

(b) (i)  $6000 \div 3 (= 2000)$

M1

Their  $2000 \times 4$

M1

*oe eg,  $\div 15 \times 20$  for M1M1*

*Either order*

8000

A1

(ii) That the survey used an unrepresentative sample

$\frac{3}{4}$  *not accurate*

*6000 not accurate / might have been rounded*

*oe*

*Some people may have lied*

$\frac{3}{4}$  *and 6000 may be from different sources*

B1

[6]

**M6.** Suitable question:

*eg Do you think eating fast foods is:*

*Accept "do you think ..."*

*"don't you think ..."*

B1

Suitable response boxes:

*eg*

☐ *a healthy*

☐ *b unhealthy*

☐ *c ok*

☐ *d don't know*

B1 dep

[2]

