



Pearson

Mark Scheme (Results)

Summer 2017

Pearson Edexcel GCSE
In Statistics (2ST01)
Foundation Paper 1F

5ST1F

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NOTES ON MARKING PRINCIPLES

- 1** All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- 2** Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- 3** All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- 4** Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- 5** Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.
- 6** Mark schemes will indicate within the table where, and which strands of QWC, are being assessed. The strands are as follows:

i) *ensure that text is legible and that spelling, punctuation and grammar are accurate so that meaning is clear*

Comprehension and meaning is clear by using correct notation and labeling conventions.

ii) *select and use a form and style of writing appropriate to purpose and to complex subject matter*

Reasoning, explanation or argument is correct and appropriately structured to convey mathematical reasoning.

iii) *organise information clearly and coherently, using specialist vocabulary when appropriate.*

The mathematical methods and processes used are coherently and clearly organised and the appropriate mathematical vocabulary used.

7 With working

If there is a wrong answer indicated on the answer line always check the working in the body of the script (and on any diagrams), and award any marks appropriate from the mark scheme.

If working is crossed out and still legible, then it should be given any appropriate marks, as long as it has not been replaced by alternative work.

If it is clear from the working that the "correct" answer has been obtained from incorrect working, award 0 marks. Send the response to review, and discuss each of these situations with your Team Leader.

If there is no answer on the answer line then check the working for an obvious answer.

Any case of suspected misread loses A (and B) marks on that part, but can gain the M marks. Discuss each of these situations with your Team Leader.

If there is a choice of methods shown, then no marks should be awarded, unless the answer on the answer line makes clear the method that has been used.

8 Follow through marks

Follow through marks which involve a single stage calculation can be awarded without working since you can check the answer yourself, but if ambiguous do not award.

Follow through marks which involve more than one stage of calculation can only be awarded on sight of the relevant working, even if it appears obvious that there is only one way you could get the answer given.

9 Ignoring subsequent work

It is appropriate to ignore subsequent work when the additional work does not change the answer in a way that is inappropriate for the question: e.g. incorrect canceling of a fraction that would otherwise be correct

It is not appropriate to ignore subsequent work when the additional work essentially makes the answer incorrect e.g. algebra.

Transcription errors occur when candidates present a correct answer in working, and write it incorrectly on the answer line; mark the correct answer.

10 Probability

Probability answers must be given as fractions, percentages or decimals. If a candidate gives a decimal equivalent to a probability, this should be written to at least 2 decimal places (unless tenths).

Incorrect notation should lose the accuracy marks, but be awarded any implied method marks.

If a probability answer is given on the answer line using both incorrect and correct notation, award the marks.

If a probability fraction is given then cancelled incorrectly, ignore the incorrectly cancelled answer.

11 Linear equations

Full marks can be gained if the solution alone is given on the answer line, or otherwise unambiguously indicated in working (without contradiction elsewhere).

Where the correct solution only is shown substituted, but not identified as the solution, the accuracy mark is lost but any method marks can be awarded.

12 Parts of questions

Unless allowed by the mark scheme, the marks allocated to one part of the question CANNOT be awarded in another.

13 Range of answers

Unless otherwise stated, when an answer is given as a range, e.g [3.5 – 4.2] then this is inclusive of the end points and includes all numbers within the range.

Guidance on the use of codes within this mark scheme

M1 – method mark

A1 – accuracy mark (dependent on method mark)

B1 – working mark

C1 – communication mark

QWC – quality of written communication

awrt – answer which rounds to

oe – or equivalent

cao – correct answer only

ft – follow through

sc – special case

dep – dependent (on a previous mark or conclusion)

indep – independent

isw – ignore subsequent working

| Question | Scheme | Marks |
|----------|---|----------------------------|
| 1(a) | 4500 | B1 (1) |
| (b) | Any two from: <ul style="list-style-type: none"> • Misleading • Stick men are different sizes • Unequal spacing • No key • No title • Poor scale / hard to subdivide stickmen | B1 B1 (2) [3] |
| Notes | | |
| (b) | Allow wording clearly implying one of the six reasons. Each point once only. ‘Different sized age groups’ is B0 | |

| Question | Scheme | Marks |
|----------|--|------------------|
| 2(a) | It is a question (not a hypothesis) | B1 (1) |
| (b) | Temperature Altitude / height (above sea level) | B1 B1 (2) |
| (c) | Scatter (diagram/graph/chart) | B1 (1) [4] |
| Notes | | |
| (a) | B1 for recognising that a question is not acceptable as a hypothesis | |
| (b) | B1 for temperature o.e. e.g. ‘°C’ or ‘how hot it is’ B1 but e.g. ‘weather’ is B0 B1 for altitude/height o.e. e.g. ‘metres above sea level’ Accept temperature/height seen within a sentence. Two correct answers may be seen on one line. | |
| (c) | ‘Scatter’ as one of multiple answers scores B0 | |

| Question | Scheme | Marks |
|-------------|---|------------|
| 3(a) | At least two positive numbers (e.g. 20, 40) correctly on vertical axis. | B1 (1) |
| (b) | Both axes with correct labels (percentage and country o.e.) | B1 (1) |
| (c) | Bar drawn of height 5 gaps. | B1 (1) |
| (d) | (much) higher % for UK compared with USA | B1 (1) |
| | | [4] |

| Notes | |
|------------|---|
| (a) | Note scale must be 5 units per gap. May be incomplete but must be <u>linear</u> . |
| (b) | Allow ‘%’ on vertical axis |
| (c) | Ignore bar width and shading. There should be no gap between top of bar and 5 th line. |
| (d) | Assume comment is about UK if no mention of UK/USA. Allow equivalent wording indicating that UK is higher %. e.g. more than 3 times as many. Condone ‘many more considering UK’. Ignore any incorrect figures. |

| Question | Scheme | Marks | | | | | | | | | | | | | | | | | | | | |
|-------------|--|-------------|-----------|-------------|-----------|-------|------|----------|----------|----------|-----------|--------|----------|-----------|----------|-----------|-------|-----------|-----------|-----------|-------------|-------------|
| 4(a) | <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>Swimming</th> <th>Spin class</th> <th>Multi-gym</th> <th>Total</th> </tr> </thead> <tbody> <tr> <th>Male</th> <td style="text-align: center;"><i>9</i></td> <td style="text-align: center;"><i>7</i></td> <td style="text-align: center;"><i>7</i></td> <td style="text-align: center;">23</td> </tr> <tr> <th>Female</th> <td style="text-align: center;">7</td> <td style="text-align: center;"><i>11</i></td> <td style="text-align: center;"><i>4</i></td> <td style="text-align: center;"><i>22</i></td> </tr> <tr> <th>Total</th> <td style="text-align: center;">16</td> <td style="text-align: center;"><i>18</i></td> <td style="text-align: center;">11</td> <td style="text-align: center;"><i>(45)</i></td> </tr> </tbody> </table> | | Swimming | Spin class | Multi-gym | Total | Male | <i>9</i> | <i>7</i> | <i>7</i> | 23 | Female | 7 | <i>11</i> | <i>4</i> | <i>22</i> | Total | 16 | <i>18</i> | 11 | <i>(45)</i> | M1A1 (2) |
| | Swimming | Spin class | Multi-gym | Total | | | | | | | | | | | | | | | | | | |
| Male | <i>9</i> | <i>7</i> | <i>7</i> | 23 | | | | | | | | | | | | | | | | | | |
| Female | 7 | <i>11</i> | <i>4</i> | <i>22</i> | | | | | | | | | | | | | | | | | | |
| Total | 16 | <i>18</i> | 11 | <i>(45)</i> | | | | | | | | | | | | | | | | | | |
| (b) | 45 | B1ft (1) | | | | | | | | | | | | | | | | | | | | |
| | | [3] | | | | | | | | | | | | | | | | | | | | |

| Notes | |
|------------|---|
| (a) | M1A1 all four values correct (23, 7, 16, 11) – table total (45) not needed here. Otherwise M1 for two of the four values correct. |
| (b) | Answer must be seen in part (b). If 2 marks not scored in part (a) then accept here: their table total, OR sum of their two row totals OR sum of their three column totals |

| Question | Scheme | Marks |
|----------|---|--------------------------------|
| 5(a) | $\frac{4}{20}$ o.e. | B1 (1) |
| (b) | 6 | B1 (1) |
| (c) | Edrik OR $\frac{3}{25}$ (is more likely to be closer) ... due to larger sample | B1 dB1 (2) [4] |

| Notes | |
|-------|--|
| (a) | Any equivalent fraction/decimal/percentage. Note 20% is B1; 20 alone is B0 |
| (b) | Accept '6 out of 50', but not 6/50 |
| (c) | 1 st B1 for correct decision 2 nd B1 dependent upon 1 st B1 for some indication that larger <u>samples</u> can lead to a more accurate estimate. e.g. '50>20', 'used more people', 'more data' are all B1 BUT clear reference to a larger <u>population</u> is B0 Condone 'Edrik used a larger sample' for B1B1 |

| Question | Scheme | Marks |
|----------|---|-------------------------|
| 6(a) | 62 | B1 (1) |
| (b) | 100 – 86 = 14 | M1 A1 (2) |
| (c) | 17 – 20 | B1 (1) |
| (d) | Upward/rising trend. (Condone 'increasing') | B1 (1) [5] |

| Notes | |
|-------|---|
| (b) | M1A1 for 14 as final answer Otherwise M1 for 86 seen (may be indicated in some way in the table) |
| (c) | Allow equivalent, eg '17 to 20' |
| (d) | Condone reference to percentages rather than numbers. Condone equivalent wording such as 'going up' Condone correct description for <u>both</u> genders for B1 BUT If clear reference is to <u>one</u> gender only then B0 Direct comparison of two years only (e.g. 2013 higher than 2010) is B0 'up and down' descriptions, B0 |

| Question | Scheme | Marks |
|--|---|--|
| <p>7(a)</p> <p>(b)</p> <p>(c)</p> <p>(d)</p> <p>(e)</p> | <p>All (40) <u>scouts</u>.</p> <p>Census</p> <p>Not a large population</p> <p>One appropriate problem with using all 40 scouts e.g. <ul style="list-style-type: none"> • May not be possible to include everyone / may be absentees / non-response • Takes longer (with all 40) • More expensive (with all 40) Condone: questions may not be understood. BUT e.g. may not give truthful answers, questions may be biased, etc, B0</p> <p>e.g. How many days should the summer camp last? <input type="checkbox"/> 2-3 days <input type="checkbox"/> 4-6 days <input type="checkbox"/> 7-10 days <input type="checkbox"/> other (state:)</p> | <p>B1 (1)</p> <p>B1 (1)</p> <p>B1 (1)</p> <p>B1</p> <p>B2 (1)</p> <p>(2)</p> <p>[6]</p> |
| Notes | | |
| <p>(a)</p> <p>(c)</p> <p>(d)</p> <p>(e)</p> | <p>Must indicate all scouts in some way (e.g. ‘the 40 scouts’, or ‘the <u>whole</u> scout group’) But population <i>size</i> alone (e.g. ‘40’) is B0 ‘The scouts in the scout group’ is B0</p> <p>Allow sensible equivalent wording. e.g. ‘there are only 40 (scouts)’ is B1 Note, <i>disadvantages</i> of a sample over a census are B0 e.g. ‘may be biased/unrepresentative’ or ‘he wants answers from all’, etc. B0</p> <p>Allow sensible equivalent wording</p> <p>B2 for a complete unbiased relevant question with a time frame (‘days’ etc may be with options) and at least two discrete options/boxes (Condone gaps but not overlaps) Otherwise B1 for an unbiased relevant question with a time frame</p> | |

| Question | Scheme | Marks |
|-------------|--|------------|
| 8(a) | 2 (people) | B1 (1) |
| (b) | 3.6 (million) | B1 (1) |
| (c) | Positive skew | B1 (1) |
| (d) | Pie chart / pie diagram | B1 (1) |
| | | [4] |
| Notes | | |
| (a) | Accept '2 with 9 (million)' | |
| (b) | Accept 3 600 000 or 3.6×10^6 | |
| (c) | Need both words | |
| (d) | Allow (percentage) composite bar chart | |

| Question | Scheme | Marks |
|-------------|---|-------------|
| 9(a) | (Simple) random (sample) | B1 (1) |
| (b)* | QWC Use random numbers OR random number table/generator | B1 |
| | Plus any two points from: <ul style="list-style-type: none"> Number the customers OR get a list o.e. (ignore incorrect numbers here) Use the customers with corresponding numbers Ignore repeats OR ignore numbers out of range | B1B1 (3) |
| | | [4] |
| Notes | | |
| (a) | B1 for 'random' but 'stratified random' is B0 | |
| (b) | Allow equivalent wording. 1 st B1 is for appropriate use of random numbers. 2 nd /3 rd B1B1 for any two from the three options (each point once only). Condone each point within description of stratified sampling (up to 3 marks) BUT if describing systematic sampling award maximum 2 marks out of 3 Names in hat method is 0/3 | |

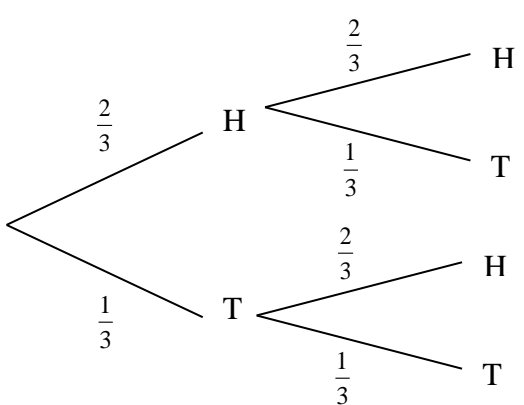
| Question | Scheme | Marks |
|---|---|--|
| <p>10(a)*</p> <p>(b)</p> <p>(c)(i)</p> <p>(ii)*</p> | <p>Positive correlation. The higher the price the more pages printed.</p> <p>Line of best fit through mean point.</p> <p>Points plotted (18, 200) and (25, 680)</p> <p>Cartridge B (is better value) as it is above the line. OR Cartridge A is worse value as it is below the line.</p> | <p>B1 B1 (2)</p> <p>B1 (1)</p> <p>B1, B1</p> <p>B2ft (4) [7]</p> |
| Notes | | |
| <p>(a)</p> <p>(b)</p> <p>(c)(i)</p> <p>(ii)</p> | <p>QWC 1st B1 Need both positive and correlation 2nd B1 for context interpretation equivalent to more expensive cartridge giving more pages. (Accept converse.)</p> <p>Appropriate <u>straight</u> line through mean point (it must at least cut the circle) extending horizontally at least from £15 to £35</p> <p>B1 for each point (condone mislabelling or no labels)</p> <p>QWC B2ft for a correct conclusion using correct interpretation of scatter diagram. (Must state B is above line OR A is below line – allow ft from their points.) Condone ‘B is above the line’ on its own for B2</p> <p>If B2 not scored then: B1ft for a partially correct answer. e.g. B with <u>any</u> reason or A is expensive but gives few pages. or A is 9p/page (or 11 pages/£) and B is 4p/page (or 27 pages/£) o.e. (accept 1sf for these)</p> <p>Note: Conclusion with no reason scores B0.</p> | |

| Question | Scheme | Marks |
|---|--|---|
| <p>11(a)</p> <p>(b)</p> <p>(c)</p> <p>(d)</p> <p>(e)</p> | <p>$76.4 - 34.9$ $= 41.5 \text{ cao}$</p> <p>Frequencies: 3, 8, 6, 2, 1 all correct (or B1 for three correct frequencies or tallies)</p> <p>$40 < t \leq 50$ o.e.</p> <p>$\frac{998}{20}$ $= 49.9 \text{ cao}$</p> <p>Takes into account all the values. o.e.</p> | <p>M1 A1 (2)</p> <p>B2 (2)</p> <p>B1ft (1)</p> <p>M1 A1 (2)</p> <p>B1 (1)</p> <p>[8]</p> |
| Notes | | |
| | <p>(a) M1 for attempt to subtract with at least one of max/min time correct, OR for correctly identifying the max and min times. (Implied by cao) ie 76.4 and 34.9 indicated uniquely in some way (may be in the list of data)</p> <p>(b) B2 for all frequencies correct. (Ignore tallies) Otherwise B1 if 3 frequencies or 3 tallies correct</p> <p>(c) B1ft Condone 40 to 50, 40-50, $40 \leq x < 50$, etc Allow ft from their <u>frequencies</u> (but not $f \times x$ etc) OR ft from their tallies Ignore extra figures (e.g. '8')</p> <p>(d) M1 for correct calculation. (May be implied by final answer 49.9 or 50) A1 for cao</p> <p>(e) Allow sensible equivalent wording to indicate <u>all</u> data used. Accept 'allows us to calculate other values' BUT 'can use to compare values to average' or 'easy to work out' are B0 'More accurate' or 'it gives the average' are B0</p> | |

| Question | Scheme | Marks |
|--|--|--|
| <p>12 (a)</p> <p>(b)</p> <p>(c)</p> <p>(d)</p> | <p>A list/register/database/electoral roll (of all voters in Great Britain)</p> <p>For any one suitable advantage from:</p> <ul style="list-style-type: none"> • (Gets results) quicker • Higher response rate • No missing data • Questions can be explained <p>For any one suitable source of bias from:</p> <ul style="list-style-type: none"> • Not everyone may be included (not everyone may have/answer a telephone) • Sampling frame/telephone directory may not be up to date • Interviewer bias/may feel pressured (to give answers that aren't truthful), not anonymous • Not random <p>61+7+5+4+3(= 80)</p> $\frac{80}{100} \times 1000 = 800$ | <p>B1 (1)</p> <p>B1 (1)</p> <p>B1 (1)</p> <p>M1 A1 (2) [5]</p> |
| Notes | | |
| <p>(a)</p> <p>(b)</p> <p>(c)</p> <p>(d)</p> | <p>Must have list/register/database/electoral roll (oe) Partial lists e.g. 'list of all voters in London' score B0</p> <p>Any suitable advantage from the four categories. Ignore extraneous non-contradictory responses. Accept converse statements about postal questionnaires. 'Can ask follow-up questions' is B0 'Cheaper' is B0 'Easier' is B0 'Gets more honest answers' is B0</p> <p>Any suitable source of bias from the four categories.</p> <p>M1 the addition of correct figures from table, i.e. 61 + 7 + 5 + 4 + 3 <u>or</u> for 80 seen</p> | |

| Question | Scheme | Marks | | | | | | | | | | | | | | | |
|-----------------|--|-----------------|-------|-------|---------|-------|------------|---------|-------|------------|----------|------------|-------|------------|------------|-------|-----|
| 13(a)(i) | 20 (%) | B1 | | | | | | | | | | | | | | | |
| (ii) | 58 – 20 = 38 (%) | M1 A1 (3) | | | | | | | | | | | | | | | |
| (b) | For drawing a composite (stacked) chart in correct order, lines at 16 then 54 then 68 and correct shading. (Tolerance of ½ line vertically) | M1 A2 (3) | | | | | | | | | | | | | | | |
| (c) | E.g. 35-54 year olds answered correctly more than 16-34. 16-34 year olds answered too high more than 35-54. | B2 (2) | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th></th> <th>16-34</th> <th>35-54</th> </tr> </thead> <tbody> <tr> <td>Too low</td> <td>(18%)</td> <td>More (20%)</td> </tr> <tr> <td>Correct</td> <td>(28%)</td> <td>More (38%)</td> </tr> <tr> <td>Too high</td> <td>More (15%)</td> <td>(10%)</td> </tr> <tr> <td>Don't know</td> <td>More (39%)</td> <td>(32%)</td> </tr> </tbody> </table> | | 16-34 | 35-54 | Too low | (18%) | More (20%) | Correct | (28%) | More (38%) | Too high | More (15%) | (10%) | Don't know | More (39%) | (32%) | [8] |
| | 16-34 | 35-54 | | | | | | | | | | | | | | | |
| Too low | (18%) | More (20%) | | | | | | | | | | | | | | | |
| Correct | (28%) | More (38%) | | | | | | | | | | | | | | | |
| Too high | More (15%) | (10%) | | | | | | | | | | | | | | | |
| Don't know | More (39%) | (32%) | | | | | | | | | | | | | | | |
| Notes | | | | | | | | | | | | | | | | | |
| (a)(ii) | M1 for 58 – ‘20’ <u>or</u> $a - 20$ (a correct ft answer with no working in (a)(ii) scores M1A0) SC: Use of 16 – 34 composite bar chart leading to 28 scores M1A0 | | | | | | | | | | | | | | | | |
| (b) | M1 for drawing a composite (i.e. stacked) chart, 4 blocks in correct order (condone not reaching 100 for the M mark) A2 for getting all correct with correct shading (Condone opposite diagonal shading for the Correct/2 nd block) OR A1 for at least 2 out of 3 lines drawn correctly (from 16, 54, 68) SC: If M0, all correct lines within tolerance is B2 (ignore shading). | | | | | | | | | | | | | | | | |
| (c) | B2 for any 2 correct comparisons OR B1 for any 1 correct comparison Ignore extraneous non-contradictory comments. Condone ‘about the same percentage answered too low for each age group’. Condone reference to numbers rather than percentages. | | | | | | | | | | | | | | | | |

| Question | Scheme | Marks |
|--|--|---|
| <p>14(a)(i)</p> <p>(ii)</p> <p>(b)</p> <p>*(c)</p> | <p>30 (accept 29)</p> <p>95 – 87 = 8</p> <p>For a suitable reason from:</p> <ul style="list-style-type: none"> • Only people from the USA were included in the survey (o.e.) • Percentages may be different in UK and USA (o.e.) • Data is out of date (from 2012) • Small sample size <p>... so it is not sensible (to use the results for the prediction)</p> <p>Median is 39 (for tablet owners) Median for tablets owners is higher/tablet owners are older (on average) IQR is (51.5 – 28 =) 23.5 (years) ... so similar variation in ages / IQR is (slightly) higher</p> | <p>B1</p> <p>M1 A1 (3)</p> <p>B1</p> <p>dB1 (2)</p> <p>B1 B1ft B1 B1ft (4) [9]</p> |
| Notes | | |
| <p>(a)(ii)</p> <p>(b)</p> <p>*(c)</p> | <p>M1 for subtraction of two figures between 80 and 100 (not inclusive) which may be seen on their graph e.g. 87 – 95 on its own is M0 but condone 87 – 95 = 8 for M1A1 A1 for 7, 8 or 9</p> <p>1st B1 for a suitable reason why it may not be sensible 2nd B1 dependent on first B1 for correct conclusion</p> <p>SC: For a complete argument that it is sensible to use the results e.g. 'People from USA and UK have similar social/economic background so could be sensible' B1B0.</p> <p>*(c) QWC: Must use correct statistical terms.</p> <p>1st B1 for median identified as 39 (allow ±0.5) or difference of 3 2nd B1 for correct comparison. Allow ft on their median if stated. 3rd B1 for IQR found as 23.5 (allow answers in the range [22.5 - 24.5]) 4th B1 dependent on a figure stated for IQR, for correct comparison. Allow ft on their IQR.</p> <p>More than one mark can be scored in a single comment, e.g. 'median is 3 years older' scores 1st B1, 2nd B1 and e.g. 'both IQRs are 23' scores 3rd B1, 4th B1 SC 'both IQRs are the same' scores 3rd B1, 4th B1</p> <p>(For 2nd and 4th B1 assume comment is about tablet owners if not stated.)</p> | |

| Question | Scheme | Marks |
|---|--|--|
| <p>15(a)</p> <p>(b)</p> <p>(c)</p> | <p>$\frac{1}{3}$ o.e. (Allow 0.33)</p>  <p>Correct shape tree Outcomes (H/T) Probabilities $\frac{1}{3}, \frac{2}{3}$</p> <p>$\frac{1}{3} \times \frac{1}{3}$ $= \frac{1}{9}$ (allow awrt 0.11)</p> <p>(can be implied)</p> | <p>B1 (1)</p> <p>B1 dB1 dB1 ft (3)</p> <p>M1 A1 cao (2) [6]</p> |
| Notes | | |
| <p>(a)</p> <p>(b)</p> <p>(c)</p> | <p>Any equivalent fraction/decimal/percentage. Allow 0.33</p> <p>B1 for tree with correct structure. dB1 dep on 1st B1 for sufficient labels to identify 4 correct routes/outcomes (HH/HT/TH/TT) dB1ft dep on 1st B1 for correct corresponding probabilities on all arcs. (allow 0.66 or 0.67 for $\frac{2}{3}$ and allow ft of their probability from (a)) (Condone labels on arcs and probabilities at ends.)</p> <p>M1 for correct product using their probability from (a), or using their tree. (This mark can be implied by their answer if working not shown.) A1 for equivalent fraction/decimal/percentage. (allow $0.33 \times 0.33 = 0.1089$)</p> | |

Modifications to the mark scheme for Modified Large Print (MLP) papers.

Only mark scheme amendments are shown where the enlargement or modification of the paper requires a change in the mark scheme.

The following tolerances should be accepted on marking MLP papers, unless otherwise stated below:

Angles: $\pm 5^\circ$

Measurements of length: ± 5 mm

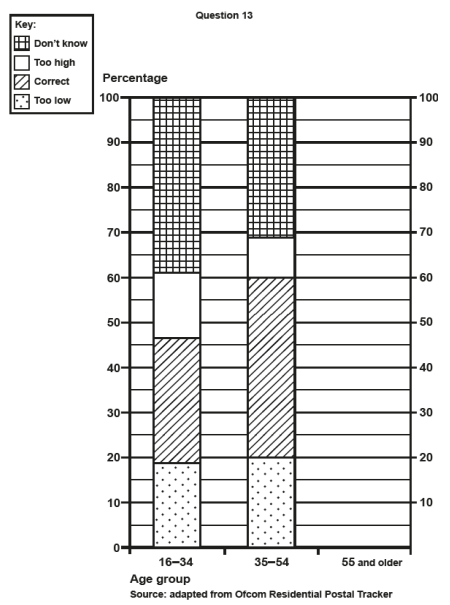
| PAPER:5ST1F_01 | | |
|----------------|--|--|
| Question | Modification | Notes |
| 1 | Diagram enlarged Stickmen changed to circles | Apply standard mark scheme except for 'stick men' read 'circles' |
| 3 | Table has been turned to vertical format and left aligned. Diagram enlarged. Shading changed to dotted shading. Braille only: horizontal axis labelled (a) and vertical axis labelled (b) | Apply standard mark scheme Braille only: Take care to identify their labels for axes |
| 4 | (a) Wording added 'There are five spaces to fill.' Braille only: empty spaces labelled (i) to (v) and table has been turned to vertical format | Standard mark scheme Braille only: Take care to identify their respective table entries |

| Question | Modification | Notes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|-------------------|-----------|------|-------------|------|-------------|------|--|--|------|------|------|------|------|------|------|------|-------|----|----|----|----|----|----|----|----|-------|----|----|----|----|----|----|----|----|-------|----|----|----|----|----|----|----|----|-------|----|----|----|----|----|----|----|----|-------|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----------|--|--|--|-------------|--|--|--|------|------|------|------|------|------|------|------|--|------|------|------|------|------|------|------|------|---|
| 6 | <p>Age groups 60-69 and 70+ have been combined and labelled 60+.</p> <p>Number for the 60+ row have changed and now are: 168, 169, 170, 173, 111, 115, 114 and 120.</p> <p>Totals row removed from the main table and put into a separate table for part (d).</p> <p>Wording added ‘adapted from’ after ‘Source:’</p> <p>Braille only: table split into 3 tables, male, female and total tables</p> <p>Wording ‘different’ changed to ‘some’ in question wording.</p> <p style="text-align: center;">Question 6</p> <table border="1" data-bbox="573 619 947 762"> <thead> <tr> <th rowspan="2">Age group (years)</th> <th colspan="4">Males (%)</th> <th colspan="4">Females (%)</th> </tr> <tr> <th>2010</th> <th>2011</th> <th>2012</th> <th>2013</th> <th>2010</th> <th>2011</th> <th>2012</th> <th>2013</th> </tr> </thead> <tbody> <tr> <td>17-20</td> <td>34</td> <td>31</td> <td>40</td> <td>30</td> <td>32</td> <td>30</td> <td>31</td> <td>31</td> </tr> <tr> <td>21-29</td> <td>66</td> <td>68</td> <td>67</td> <td>67</td> <td>60</td> <td>59</td> <td>62</td> <td>64</td> </tr> <tr> <td>30-39</td> <td>86</td> <td>81</td> <td>81</td> <td>83</td> <td>77</td> <td>74</td> <td>75</td> <td>77</td> </tr> <tr> <td>40-49</td> <td>90</td> <td>89</td> <td>88</td> <td>90</td> <td>80</td> <td>79</td> <td>81</td> <td>80</td> </tr> <tr> <td>50-59</td> <td>89</td> <td>90</td> <td>89</td> <td>90</td> <td>77</td> <td>76</td> <td>75</td> <td>77</td> </tr> <tr> <td>60+</td> <td>168</td> <td>169</td> <td>170</td> <td>173</td> <td>111</td> <td>115</td> <td>114</td> <td>120</td> </tr> </tbody> </table> <p><small>Source: adapted from Department for Transport</small></p> <p>(d) Totals row removed from main table and put into a separate table for part (d).</p> <p style="text-align: center;">Question 6(d)</p> <table border="1" data-bbox="472 994 936 1082"> <thead> <tr> <th rowspan="2"></th> <th colspan="4">Males (%)</th> <th colspan="4">Females (%)</th> </tr> <tr> <th>2010</th> <th>2011</th> <th>2012</th> <th>2013</th> <th>2010</th> <th>2011</th> <th>2012</th> <th>2013</th> </tr> </thead> <tbody> <tr> <td>Total number of licence holders (millions)</td> <td>16.4</td> <td>16.4</td> <td>16.6</td> <td>16.9</td> <td>14.2</td> <td>14.3</td> <td>14.5</td> <td>14.9</td> </tr> </tbody> </table> <p><small>Source: adapted from Department for Transport</small></p> | Age group (years) | Males (%) | | | | Females (%) | | | | 2010 | 2011 | 2012 | 2013 | 2010 | 2011 | 2012 | 2013 | 17-20 | 34 | 31 | 40 | 30 | 32 | 30 | 31 | 31 | 21-29 | 66 | 68 | 67 | 67 | 60 | 59 | 62 | 64 | 30-39 | 86 | 81 | 81 | 83 | 77 | 74 | 75 | 77 | 40-49 | 90 | 89 | 88 | 90 | 80 | 79 | 81 | 80 | 50-59 | 89 | 90 | 89 | 90 | 77 | 76 | 75 | 77 | 60+ | 168 | 169 | 170 | 173 | 111 | 115 | 114 | 120 | | Males (%) | | | | Females (%) | | | | 2010 | 2011 | 2012 | 2013 | 2010 | 2011 | 2012 | 2013 | Total number of licence holders (millions) | 16.4 | 16.4 | 16.6 | 16.9 | 14.2 | 14.3 | 14.5 | 14.9 | <p>Standard mark scheme</p> <p>Standard mark scheme</p> |
| Age group (years) | Males (%) | | | | Females (%) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2010 | 2011 | 2012 | 2013 | 2010 | 2011 | 2012 | 2013 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17-20 | 34 | 31 | 40 | 30 | 32 | 30 | 31 | 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21-29 | 66 | 68 | 67 | 67 | 60 | 59 | 62 | 64 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30-39 | 86 | 81 | 81 | 83 | 77 | 74 | 75 | 77 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40-49 | 90 | 89 | 88 | 90 | 80 | 79 | 81 | 80 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50-59 | 89 | 90 | 89 | 90 | 77 | 76 | 75 | 77 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60+ | 168 | 169 | 170 | 173 | 111 | 115 | 114 | 120 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Males (%) | | | | Females (%) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2010 | 2011 | 2012 | 2013 | 2010 | 2011 | 2012 | 2013 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total number of licence holders (millions) | 16.4 | 16.4 | 16.6 | 16.9 | 14.2 | 14.3 | 14.5 | 14.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

PAPER: 5ST1F_01

| Question | Modification | Notes |
|----------|--|---|
| 8 | <p>Diagram enlarged. Axes labels have been moved to the left of the horizontal axis and above the vertical axis. Source has been left aligned. Wording 'adapted from' added after 'Source.' Number 2 on the horizontal axis moved down to 9 million. Number 4 on the horizontal axis moved down to 3 million. Right axis has been labelled.</p> | <p>Apply standard mark scheme, except: (b) 3 (million) B1 (Accept 3 000 000 or 3×10^6)</p> |
| 10 | <p>Diagram enlarged. Right axis has been labelled. Crosses have been changed to solid dots. Mean point dot has been changed to a square bigger than the circles. Arrow head has been changed to an open headed arrow. Axes labels have been moved to the left of the horizontal axis and above the vertical axis.</p> <p>(c) [Leeway will be needed for plotting the information.] Numbers on the table changed: Cartridge A £20 200 Cartridge B £25 700</p> | <p>(a) & (b) Apply standard mark scheme, except: in (b) their line must cut the square</p> <p>(c) Apply standard mark scheme, except: (i) points plotted at (20, 200) and (25, 700) each $\pm 1/2$ square (ii) in notes for B1ft option accept: A is 10p/page (or 10 pages/£) and B is 4p/page (or 28 pages/£) o.e. (accept 1sf for these)</p> |
| 11 | List of numbers stacked in 4 rows. | Standard mark scheme |
| 12 | (d) First table of the example question has been removed. Second table has been put in the diagram book with the wording added above 'On a scale of 1 to 10, 1 being certain not to vote, 10 being certain to vote.' | Standard mark scheme |

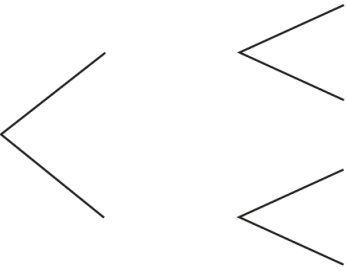
PAPER: 5ST1H_01

| Question | Modification | Notes |
|----------|---|---|
| 13 | <p>Diagram enlarged. Key moved above and to the left of the diagram. On the 35-54 category, correct has been moved up to 60%. Too low has been changed to dotted shading. Right axis has been labelled. Axes labels have been moved to the left of the horizontal axis and above the vertical axis</p>  <p>Question 13</p> <p>Percentage</p> <p>Age group</p> <p>Source: adapted from Ofcom Residential Postal Tracker</p> | <p>Apply standard mark scheme, except:</p> <p>(a)(ii) $60 - 20$ $= 40$ (%)</p> <p>Notes for (a)(ii):</p> <p>M1 for $60 - '20'$ <u>or</u> $a - 20$</p> <p>SC stands unchanged</p> |
| 13 | <p>(b) Percentages on the table changed to: 15, 40, 10 and 35.</p> <p>(c)</p> | <p>(b) lines should be at 15 then 55 then 65 (accept $\pm 1/2$ gap tolerance)</p> <p>(c) stands as it is, but figures to ignore may differ</p> |

PAPER: 5ST1F_01

| Question | | Modification | Notes |
|-----------------|--------|---|---|
| 14 | | Diagram enlarged. Line has moved to 65 goes through 90. Right axis has been labelled. Axes labels have been moved to the left of the horizontal axis and above the vertical axis. Source has been left aligned. | |
| 14 | (a) ii | Numbers '60 and 70' changed to '55 and 65'. | Apply standard mark scheme, ... answers 7, 8, 9 still provide acceptable tolerance |
| 14 | (c) | [Leeway will be needed for answering the questions] | Apply standard mark scheme, except: 1 st B1: Median is 38 (for tablet owners) or difference is 2 (accept ± 1 tolerance on these) 2 nd B1: no change 3 rd B1: IQR is (52 – 28 =) 24 (years) (accept ± 1 on quartiles so answers in range [22 – 26]) 4 th B1: no change 2 marks in 1 and SC examples stand. |

PAPER: 5ST1F_01

| Question | Modification | Notes |
|-----------------|--|--|
| 15 | <p>(b)</p> <p>The branches for the probability tree have been provided. Braille only: Lines labelled (i) to (vi) and the labels 'first flip' and 'second flip' have been added.</p> <p style="text-align: center;">Question 15(b)</p>  | <p>Apply standard mark scheme, except:</p> <p>1st B1 for two correct labels (H or T)</p> <p>No change to 2nd/3rd B1 marks</p> |

