



Pearson  
Edexcel

Mark Scheme (Results)

Summer 2022

Pearson Edexcel GCSE  
In Statistics (1ST0) Higher Tier  
Paper 1H

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## General marking guidance

These notes offer general guidance, but the specific notes for examiners appertaining to individual questions take precedence.

- 1** All candidates must receive the same treatment. Examiners must mark the last candidate in exactly the same way as they mark the first.

Where some judgement is required, mark schemes will provide the principles by which marks will be awarded; exemplification/indicative content will not be exhaustive. When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the response should be sent to review.

- 2** All the marks on the mark scheme are designed to be awarded; mark schemes should be applied positively. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme. If there is a wrong answer (or no 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.

**Questions where working is not required:** In general, the correct answer should be given full marks.

**Questions that specifically require working:** In general, candidates who do not show working on this type of question will get no marks – full details will be given in the mark scheme for each individual question.

- 3** **Crossed out work**

This should be marked **unless** the candidate has replaced it with an alternative response.

- 4** **Choice of method**

If there is a choice of methods shown, mark the method that leads to the answer given on the answer line.

If no answer appears on the answer line then mark both methods **as far as they are identical** and award these marks.

- 5** **Incorrect method**

If it is clear from the working that the "correct" answer has been obtained from incorrect working, award 0 marks.

- 6** **Follow through marks**

Follow through marks which involve a single stage calculation can be awarded without working as you can check the answer, 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.

- 7** **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 or its context. (eg an incorrectly cancelled fraction when the unsimplified fraction would gain full marks).

It is not appropriate to ignore subsequent work when the additional work essentially makes the answer incorrect (eg incorrect algebraic simplification).

**8 Probability**

Probability answers must be given as a fraction, percentage or decimal. 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 fraction is given then cancelled incorrectly, ignore the incorrectly cancelled answer.

**9 Range of answers**

Unless otherwise stated, when an answer is given as a range (eg 3.5 – 4.2) then this is inclusive of the end points (eg 3.5, 4.2) and all numbers within the range.

### Guidance on the use of abbreviations within this mark scheme

- M** method mark awarded for a correct method or partial method
- A** accuracy mark (awarded after a correct method; if no method is seen then full marks for the question are implied but see individual mark schemes for more details)
- B** unconditional accuracy mark (no method needed)
- oe** or equivalent
- cao** correct answer only
- ft** follow through (when appropriate as per mark scheme)
- sc** special case
- dep** dependent (on a previous mark)
- indep** independent
- awrt** answer which rounds to
- isw** ignore subsequent working

Question	Answer	Additional Guidance	Marks
1	<p>B2 for (median) height of seedlings grown in sunlight is 41 cm <b>and</b> the (median) height of seedlings grown in the shade is 27 cm (B1 for either median correct, must be identified as median).</p> <p><b>OR</b></p> <p>B2 for (mean) height of seedlings grown in sunlight is awrt 40.2 cm <b>and</b> the (mean) height of seedlings grown in the shade is awrt 26.3 cm (B1 for either mean correct, must be identified as mean).</p> <p><b>OR</b></p> <p>B2 for (modal) height of seedlings grown in sunlight is 35 cm <b>and</b> the (modal) height of seedlings grown in the shade is 31 cm (B1 for either mode correct, must be identified as mode).</p> <p>depB1ft for any of the above interpreted <b>in context</b></p> <ul style="list-style-type: none"> <li>Seedlings grown in sunlight are on average taller than seedlings grown in the shade.</li> </ul>	<p>For B2 identification of which average used is not required. For B1 median / mean / mode must be indicated.</p> <p>Accept 40 cm Accept 26 cm Accept 40.235... or 26.294... rounded or truncated to 1dp or greater</p> <p>If multiple averages given with some correct and some incorrect then award marks for those correct. E.g. means – both incorrect, medians – both correct then B2</p> <p>Dep on two average values stated (may be incorrect). The statement must refer to, or imply heights (by using the word taller/shorter) Condone bigger / smaller trees.</p>	(3)

Question	Answer	Additional Guidance	Marks
2 (a)	B1 for 3.7		(1)
	(b) M1 for $2.8 + 2.9 = \dots$ A1 for 5.7	Not as part of a larger calculation.	(2)
	(c) M1 $\frac{13310}{65\,511\,097} [\times 100]$ A1 0.0203... (%) Accept awrt 0.02(%)  A1dep All of the data in the table has been rounded to 1 decimal place and 0.02(%) correct to 1 decimal place is 0.0(%), (so the table is correct)  <b>ALT</b> M1 $0.05\% \text{ of } 65\,511\,097 = \left[ \frac{0.05}{100} \times 65\,511\,097 \right] = (32\,755(.5485))$ A1 32 755 A1dep As 0.05% of 65 511 097 [32 755] is greater than 13 310 that means that 13 310 is 0.0(%) rounded to 1 decimal place.  If 0 scored SCB1 for 65511(.097)	Dep on previous A mark Must refer to rounding to 1 decimal place or state rounds to 0.0(%)  For awrt 32 755 Dep on previous A mark	(3)
	(d) Without percentages quoted: B2 for <ul style="list-style-type: none"> <li>From the age of 40 upwards, each year group in the population has a greater percentage of women than men, so Jamie's claim is incorrect.</li> </ul> (B1 for from the age of 40 upwards, each year group in the population has a greater percentage of women than men with no or incorrect conclusion)  With percentages quoted: B2 for <ul style="list-style-type: none"> <li>The percentage of males (age 40 upwards) is 24% and the percentage of females (age 40 upwards) is 26.3% OR there are 2.3% more females (age 40 upwards), so Jamie's claim is incorrect</li> </ul> (B1 for percentage of males (age 40 upwards) is 24% and the percentage of females (age 40 upwards) is 26.3% OR there are 2.3% more females (age 40 upwards) with no or incorrect conclusion) (B1ft for only one correct figure with a correct conclusion (ft their percentages))	May also refer to number of males / females: Male 15722663(.28) Female 17229419(.51) B0 if neither percentage total (or neither number of males/females) for age 40 upwards is correct	(2)

Question	Answer	Additional Guidance	Marks
3 (a)	B1 for one from <ul style="list-style-type: none"> <li>• Data must be in the same form before it can be used / she has data in different formats / (the percentage of motorcycles) says two not 2</li> <li>• The data set must be complete before it can be used / there is missing data</li> <li>• (Percentages) don't add up to 100</li> </ul>	Ignore additional comments unless contradictory.	(1)
(b)	B1 for one of <ul style="list-style-type: none"> <li>• the total of the numbers in the motorcycle column must be 100 so 124 has to be 24</li> <li>• it is greater than 100 and is a percentage</li> <li>• because the total is 100</li> </ul>	Do not accept reference to outlier / anomaly	(1)
(c)	Uses 50 as the median M1 For identifying $70 \leq s < 80$ M1 $\frac{17}{56} \times 10$ A1 for 73.04 (mph) Accept awrt 73 (mph) <b>ALT</b> Uses 50.5 as the median M1 For identifying $70 \leq s < 80$ M1 $\frac{17.5}{56} \times 10$ A1 for 73.125 (mph) Accept awrt 73 (mph)	May be implied by $70 + \dots$ Allow first M mark for $\frac{70+80}{2}$  For reference: The estimated <b>mean</b> speed of the motorcycles is 71.7 mph. This scores M0M0A0	(3)
(d)	B2 fully correct frequency polygon – all 6 points correctly plotted and joined with straight lines  (B1 all 6 points plotted correctly but not joined OR at least 3 points correct and joined with straight lines OR for joining the points with line segments at the correct heights consistent within intervals (including end points))	For B2 condone line joining (85,11) to $x$ -axis, but not joining start to end For B2 or B1 allow for 5 points used if (35,0) is omitted  Points are: [(35, 0)] (45, 2) (55, 7) (65, 24) (75, 56) (85, 11)	(2)



<p>(e)</p>	<p>B1 for</p> <ul style="list-style-type: none"> <li>• Distribution of the cars is symmetrical / (weak) positive skew whereas the distribution of the motorcycles is negatively skewed.</li> </ul> <p>B1 for</p> <ul style="list-style-type: none"> <li>• This means that for the cars the speeds are equally spread out on either side of the median and for the motorcycles the speeds are mainly at the upper end of the distribution with those speeds less than the median more spread out.</li> <li>• For the cars there are 50% of speeds above the mean and for the motorcycles there are more than 50% of the speeds above the mean.</li> </ul>	<p>Accept 'not skewed' for 'symmetrical' Do not accept 'normally distributed' or 'symmetrical skew' for symmetrical</p> <p>Comment must be on spread of data within distribution.</p> <p>B0 for motorcycles are faster than cars Allow the 2<sup>nd</sup> B1 for interpreting one of the skews in context:</p> <ul style="list-style-type: none"> <li>• for the cars the speeds are equally spread out on either side of the median</li> <li>• for the motorcycles the speeds are mainly at the upper end of the distribution with those speeds less than the median more spread out</li> <li>• for the cars there are 50% of speeds above the mean</li> <li>• for the motorcycles there are more than 50% of the speeds above the mean</li> </ul>	<p>(2)</p>
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Question	Answer	Additional Guidance	Marks
4	<p>B2 All three sampling methods correctly identified:  <b>A</b> – Quota  <b>B</b> – Systematic  <b>C</b> – Stratified</p> <p>B1 for an appropriate comment on sampling method <b>A</b> e.g.</p> <ul style="list-style-type: none"> <li>• every shop is represented</li> <li>• method is not random</li> <li>• biased / directors choose individuals to include</li> <li>• numbers sampled not in proportion to size of stores</li> <li>• may not give you 450 people</li> </ul> <p>B1 for an appropriate comment on sampling method <b>B</b> e.g.</p> <ul style="list-style-type: none"> <li>• easy to carry out</li> <li>• not every shop is represented / unrepresentative</li> <li>• method is not random</li> <li>• intervals may coincide with a pattern</li> </ul> <p>B1 for an appropriate comment on sampling method <b>C</b> e.g.</p> <ul style="list-style-type: none"> <li>• method is random (condone for this mark if this is identified as the sampling type)</li> <li>• every shop is represented / representative</li> <li>• each employee has an equal chance of being selected</li> <li>• not biased</li> </ul> <p>depB1 for identifying which method is most appropriate therefore chose <b>C</b></p>	<p>B2 for identifying all three types of sampling correctly  (B1 for identifying one or two types of sampling correctly)  For <b>A</b> condone judgement sampling</p> <p>Ignore additional comments unless contradictory.  Do <u>not</u> accept for A:</p> <ul style="list-style-type: none"> <li>• it is in proportion to store size</li> </ul> <p>Condone for A:</p> <ul style="list-style-type: none"> <li>• not everyone has an equal chance of being selected</li> </ul> <p>Do <u>not</u> accept for B:</p> <ul style="list-style-type: none"> <li>• it is quick</li> </ul> <p>Condone for B:</p> <ul style="list-style-type: none"> <li>• not everyone has an equal chance of being selected</li> </ul> <p>dep on at least B1B1 scored out of the 3<sup>rd</sup> to 5<sup>th</sup> marks  Do not award for multiple methods identified as appropriate.</p>	(6)

Question	Answer	Additional Guidance	Marks
5 (a)	<p>M1 for 5 or 6 points plotted correctly (280, 7) (320, 15) (360, 25) (400, 34) (440, 38) (480, 41)</p> <p>A1 for a fully correct graph</p> <p>SCB1 if 5 or 6 points plotted not at end but consistently within each interval and joined by a curve or line segments provided no gradient is negative</p>	<p>Do not accept bar chart heights as correct coordinates. Condone lines drawn vertically to correct coordinates.</p> <p>Ignore to the left of the first point and to the right of the last point.</p> <p>Accept a smooth curve or line segments</p>	(2)
(b)	<p>M1 for <math>22 - 10 = \dots</math></p> <p>A1FT for 12 houses</p>	<p>Accept <math>23 - 11 = \dots</math></p> <p>Follow through their cumulative frequency graph.</p> <p>Accept 11, 12 or 13</p> <p>Follow through an integer answer using <i>their</i> 22 and <i>their</i> 10 from a cumulative frequency graph.</p>	(2)
(c)	<p>B2 for not sensible with a correct reason e.g.</p> <ul style="list-style-type: none"> <li>• The survey is relevant only to the area of Streetly (in the West Midlands), so it is not sensible.</li> <li>• Houses in Central London were not in the survey, so it is not sensible.</li> </ul> <p>(B1 for a suitable reason with no or incorrect conclusion or for identifying not sensible with an attempt at a reason).</p>	<p>Accept any other reasonable statistical reason.</p> <p>B0 for not sensible with no attempt at a reason.</p>	(2)

Question	Answer	Additional Guidance	Marks
<b>6 (a)</b>	B1 Scatter diagram		<b>(1)</b>
<b>(b)</b>	<p>M1 <math>\sum d^2 = 1 + 1 + 0 + 4 + 4 + 4 + 4 + 1 + 49 + 1 + 1 + 1 + 9 + 16 + 1 + 25 + 9 + 25 + 1 + 121 = 278</math></p> <p>M1 <math>\left[1 - \frac{6\sum d^2}{n(n^2-1)}\right] = 1 - \frac{6 \times 278}{20(20^2-1)}</math></p> <p>A1 [SRCC] = 0.791</p>	<p>Allow adding <math>d^2</math> with at most two of <i>their</i> <math>d^2</math> incorrect</p> <p>Allow if the value stated for <i>their</i> <math>\sum d^2</math> is equal to <math>96 + '1' + '25' + '9' + '25' + '1' + '121'</math></p> <p>'278' from an attempt at <math>\sum d^2</math></p> <p>Attempt at <math>\sum d^2</math> may be <math>d^2</math> values seen added or implied by <math>100 \leq 278' \leq 300</math></p> <p>Accept 0.8 with correct working or 0.79 or awrt 0.791</p>	<b>(3)</b>
<b>(c)</b>	<p>B1FT</p> <ul style="list-style-type: none"> <li>As the mean value of players increases, the position of the team in the table is higher.</li> </ul> <p>B1</p> <ul style="list-style-type: none"> <li>(Anomalous data) would decrease the correlation.</li> </ul>	<p>FT <i>their</i> value of SRCC from (b) as long as <math>-1 \leq \textit{their} \text{ SRCC} \leq 1</math></p>	<b>(2)</b>
<b>(d)</b>	<p>B1 for PMCC measures (the strength of) linear correlation / linear association</p> <p>B1 for Spearman's rank correlation is used for ranked data/ordinal data</p> <p>depB1 – for a conclusion that Gaby used an appropriate method OR (Amelia's suggestion is) not appropriate</p>	<p>Condone linear data / linear graph</p> <p>Do not allow if also refers to PMCC measuring ranked data / ordinal data / non-linear association</p> <p>This is dependent on at least one B1 scored earlier.</p>	<b>(3)</b>

Question	Answer	Additional Guidance	Marks
7 (a)	B1 for because the data is given in quarters for the year.	Or equivalent statement Must be referring to data being in quarters Condone reference to 4 seasons B0 for e.g. to see the quarterly change.	(1)
(b)	B1 for point plotted correctly	1181.75 plotted halfway between 2 <sup>nd</sup> and 3 <sup>rd</sup> quarters of 2018	(1)
(c)	B1 Appropriate ruled trend line	Line must pass between 960 and 1080 at Q4 2015 1120 and 1320 at Q1 2018 Ignore if moving averages also connected pointwise	(1)
(d)	B3 for (B1 for each step) of the steps below mentioned. <ul style="list-style-type: none"> <li>Work out the seasonal variation for each first quarter using seasonal variation = actual value – trend value</li> <li>Work out the estimated average seasonal effect as the mean of all the (first quarter) seasonal variations</li> <li>Work out the predicted value for the first quarter of 2019 using trend line value + estimated average seasonal effect</li> </ul>	B1 for each point described. Allow for description of process - reference to e.g. 'seasonal variation' not required	(3)

Question	Answer	Additional Guidance	Marks
8 (a)	B2 for <ul style="list-style-type: none"> <li>The (average) price of houses is increasing (year on year), but the (rate of) increase is decreasing</li> </ul> (B1 for <ul style="list-style-type: none"> <li>The (average) price of houses is increasing (year on year).)</li> </ul>	B0 for reference to decreasing only.	(2)
(b)	M1 for $\frac{215243}{1.0476} = (205\ 462.963)$ or $\frac{215243}{104.76} \times 100 = (205\ 462.963)$ A1 for 205 463  <b>OR</b> SCB1 for answer 199 743	Accept awrt 205 463  For SC accept answer awrt 199 743	(2)

Question	Answer	Additional Guidance	Marks
9	<p>M1 [Bag X <math>P(R_X) = \frac{3}{8}</math> Bag Y <math>P(R_Y) = \frac{5}{9} \Rightarrow P(R_X \cap R_Y) = \frac{3}{8} \times \frac{5}{9} (= \frac{15}{72})</math></p> <p>OR [Bag X <math>P(Y_X) = \frac{5}{8}</math> Bag Y <math>P(Y_Y) = \frac{4}{9} \Rightarrow P(Y_X \cap Y_Y) = \frac{5}{8} \times \frac{4}{9} (= \frac{20}{72})</math></p> <p>M1 for <math>\frac{3}{8} \times \frac{5}{9} + \frac{5}{8} \times \frac{4}{9}</math></p> <p>A1 [<math>P(\text{Discs the same colour}) = \frac{35}{72}</math></p> <p>ALT</p> <p>M2 for <math>1 - (\frac{3}{8} \times \frac{4}{9} + \frac{5}{8} \times \frac{5}{9})</math></p> <p>A1 [<math>P(\text{Discs the same colour}) = \frac{35}{72}</math></p>	<p>Formal notation is not required Allow decimal and percentage equivalents.</p> <p>0.49 or 0.486(1...) 49% or 48.6(1...)%</p> <p>If following the ALT approach then there is no M1 before the M2 is scored.</p>	(3)

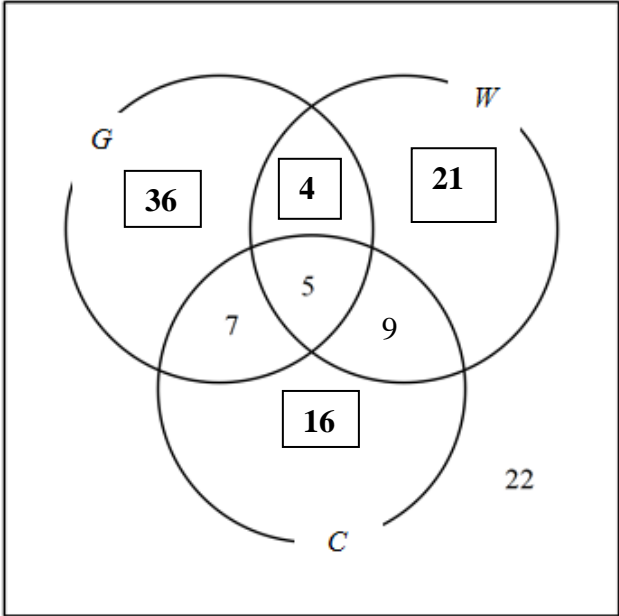
Question	Answer	Additional Guidance	Marks
10	<p>M1 [Numeracy =] <math>\frac{49-42}{3.5} (= 2)</math> or [Literacy =] <math>\frac{50-40}{7.5} (= 1.33...)</math></p> <p>A1 for [Numeracy =] 2</p> <p>A1 for [Literacy =] 1.33... or <math>\frac{4}{3}</math> or <math>1\frac{1}{3}</math></p> <p>B1dep ft for better score/performance in Numeracy test (relative to other candidates) as the standardised score is higher</p> <p>B1dep ft for a statement that Huan's conclusion is not justified.</p>	<p>Allow for 1.3</p> <p>dep on M1 scored</p> <p>For B marks comment must be consistent with <i>their</i> values</p> <p>B1B1 for e.g. Huan is wrong as the standardised score is higher for the numeracy test</p>	(5)

Question	Answer	Additional Guidance	Marks
11 (a)	B1 for one of e.g. <ul style="list-style-type: none"> <li>• the exact values are not known</li> <li>• the data has been grouped / is in intervals</li> <li>• we have to use midpoints</li> </ul>		(1)
(b)	Calculates standard deviation M1 $\left[ \text{s. d.} = \sqrt{\frac{\sum ft^2}{\sum f} - \left(\frac{\sum ft}{\sum f}\right)^2} \right] = \sqrt{\frac{252331.25}{50} - \left(\frac{3542.5}{50}\right)^2} (= 5.186(7 \dots))$ Calculates skew M1 skew = $\frac{3(70.85-71.18)}{5.187}$ A1 skew = -0.1908...	For second M must be a numerical standard deviation and not just ‘standard deviation’ and ‘5.187’ should come from an attempt at using a standard deviation formula. Accept awrt -0.19	(3)
(c)	B1ft for Eg <ul style="list-style-type: none"> <li>• Skew is (slightly) negative so that there is a greater spread of times less than the median than of times greater than the median.</li> <li>• Skew is (slightly) negative so the mean time taken by 50 boys to run 400m is less than the median.</li> <li>• Skew is (slightly) negative so there were more times greater than the mean.</li> </ul>	Ft <i>their</i> (b) <u>Condone</u> Skew is close to 0 so the distribution of the times of runners is symmetrical	(1)

Question	Answer	Additional Guidance	Marks
12 (a)	B2 for any two from; <ul style="list-style-type: none"> <li>• The rolls of the dice are independent</li> <li>• There are only two possible outcomes – rolling a 6 and not rolling a 6</li> <li>• The probability of rolling a 6 is constant</li> </ul> OR if B2 not scored then B1 for one correct condition stated	To award B2 at least one must be given in context  Allow ‘there are a fixed number of dice rolls’ as one of the conditions.	(2)
(b)	M1 $[P(X = 4) =] \left(\frac{1}{6}\right)^4$ A1 $\frac{1}{1296}$	Formal notation NOT required Condone omission of brackets in (fraction) <sup>power</sup> Accept fraction, decimal or percentage for method and answer.	(2)
(c)	M1 $[P(X = 0) =] \left(\frac{5}{6}\right)^4 \left(= \frac{625}{1296}\right)$ or $[P(X = 1) =] 4 \times \left(\frac{1}{6}\right) \times \left(\frac{5}{6}\right)^3 \left(= \frac{500}{1296} = \frac{125}{324}\right)$  M1 $[P(X \geq 2) =] 1 - \left[\left(\frac{5}{6}\right)^4 + 4 \times \left(\frac{1}{6}\right) \times \left(\frac{5}{6}\right)^3\right]$ A1 $\frac{19}{144}$  <b>ALT</b> M1 $[P(X = 2) =] 6 \times \left(\frac{1}{6}\right)^2 \times \left(\frac{5}{6}\right)^2 \left(= \frac{150}{1296} = \frac{25}{216}\right)$ or $[P(X = 3) =] 4 \times \left(\frac{1}{6}\right)^3 \times \left(\frac{5}{6}\right)^1 \left(= \frac{20}{1296} = \frac{5}{324}\right)$  M1 $[P(X \geq 2) =] 6 \times \left(\frac{1}{6}\right)^2 \times \left(\frac{5}{6}\right)^2 + 4 \times \left(\frac{1}{6}\right)^3 \times \left(\frac{5}{6}\right)^1 + 1 \times \left(\frac{1}{6}\right)^4$ A1 $\frac{19}{144}$	Formal notation NOT required Condone omission of brackets in (fraction) <sup>power</sup> For first method mark in either approach the calculation may be seen added to others.  Accept fraction, decimal or percentage for method and answer.   Accept fraction, decimal or percentage for method and answer.	(3)



Question	Answer	Additional Guidance	Marks
13	<p>M1 – Either <math>\sqrt[5]{1.017 \times 1.018 \times 1.023 \times 1.029 \times 1.035}</math> <b>Shop A</b>  or <math>\sqrt[4]{1.009 \times 1.014 \times 1.011 \times 1.057}</math> <b>Shop B</b></p> <p>A1 – for the correct geometric mean for <b>Shop A</b> = 1.02437... [= 2.44%]  A1 – for the correct geometric mean for <b>Shop B</b> = 1.02256... [= 2.26%]  OR  SCB1 for 2.3484... <b>or</b> 1.6765...</p> <p><b>AND</b></p> <p>B2 – for the conclusion – Suzie’s conclusion is not correct. The average percentage profit is 2.44% for <b>Shop A</b> and 2.26% for <b>Shop B</b>  (B1dep ft – for Suzie’s conclusion is not correct without supporting values or with incorrect supporting values)</p>	<p>For either calculation correct  Must see working to award M, A marks (arithmetic mean for shop A is also 2.44%)</p> <p>Allow for awrt 2.35, awrt 1.68</p> <p>Dep on one previous mark scored.</p>	(5)

Question	Answer	Additional Guidance	Marks
14	<p>B1 for 4 and 36 associated with the correct regions on the Venn diagram</p> <p>M1 for using the addition formula</p> $\frac{41}{60} = \frac{82}{120} = \frac{7+5+'4'+'36'}{120} + \frac{9+5+'4'+x}{120} - \frac{5+'4'}{120}$ <p>OR</p> $2 \times 41 - '36' - '4' - 5 - 7 - 9 (=21)$ <p>A1ft for '21' associated with the correct region of the Venn diagram</p> <p>depB1ft for finding 16</p> 	<p>May be by correctly completing the Venn diagram or by labelling with letters and correctly finding</p> <p>Ft their 4 and 36</p> <p>Dependent on 1 previous mark scored. 77 - '4' - '36' - '21'</p>	(4)

## **Modifications to the mark scheme for Modified Large Print (MLP) papers: 1ST0 1H**

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:  $\pm 5$  mm

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**PAPER: 1ST0\_1H**

<b>Question</b>		<b>Modification</b>	<b>Mark scheme notes</b>
1		<p>Wording added 'Look at the diagram for Question 1 in the Data Booklet. It shows two stem and leaf diagrams.'</p> <p>The wording 'The following stem and leaf diagrams' removed and replaced by 'The stem and leaf diagrams in the Data Booklet'.</p> <p>Diagram enlarged.</p> <p>Keys moved above each diagram.</p>	
2		<p>Wording added 'Look at the diagram for Question 2 in the Data Booklet. It shows a population pyramid that'.</p> <p>The wording 'The population pyramid' removed.</p> <p>Diagram enlarged.</p> <p>Tracking lines added.</p> <p>Grey shading removed.</p> <p>Axes labels moved to the top of the vertical axis and to the left on the horizontal axis.</p> <p>Right side labelled.</p>	
2	(d)	<p>Wording added 'in the Data Booklet'.</p>	
3		<p>Wording added 'Look at the table for Questions 3(a) and 3(b) in the Data Booklet.'</p> <p>The wording 'Here is' removed and replaced with 'The table shows'.</p> <p>Table enlarged.</p>	

**PAPER: 1ST0\_1H**

<b>Question</b>		<b>Modification</b>	<b>Mark scheme notes</b>
3	(c)	<p>Modified Question</p> <p>Wording added ‘Look at the table for Question 3(c) in the Data Booklet.’</p> <p>The wording ‘Here is’ removed and replaced with ‘It shows’.</p> <p>Table enlarged.</p> <p>Values in the table changed:</p> <p>2 to 4</p> <p>7 to 8</p> <p>11 to 8</p> <p>The answer to Question 3(c) is changed slightly with the new values so they land on grid lines.</p>	
3	(d)	<p>Wording added ‘Look at the diagram for Question 3(d) in the Data Booklet. It shows’.</p> <p>The word ‘the’ removed and replaced with ‘a’.</p> <p>Wording ‘has been’ removed.</p> <p>Wording added ‘in the Data Booklet,’</p> <p>Wording added ‘using the values in the table for Question 3(c) in the Data Booklet.’</p> <p>Diagram enlarged.</p> <p>Grid intervals moved to 4 on the vertical axis and 5 on the horizontal axis.</p> <p>Open headed arrows.</p> <p>Axes labels moved to the top of the vertical axis and to the left on the horizontal axis.</p>	
3	(e)	<p>Wording added ‘on the grid in the Data Booklet’.</p>	
4		<p>Wording added ‘Look at the information for Question 4 in the Data Booklet. It shows three sampling methods that might be used by a supermarket.’</p> <p>Wording added ‘in the Data Booklet’.</p>	

**PAPER: 1ST0\_1H**

<b>Question</b>	<b>Modification</b>	<b>Mark scheme notes</b>
5	<p>Modified Question</p> <p>Wording added ‘Look at the diagram for Question 5 in the Data Booklet. It shows a grid.’</p> <p>The number ‘41’ changed to ‘40’.</p> <p>The word ‘below’ added.</p> <p>Table enlarged.</p> <p>Values changed in the table.</p> <p>7 to 8</p> <p>15 to 16</p> <p>25 to 24</p> <p>34 to 32</p> <p>38 to 36</p> <p>41 to 40</p>	
5	<p>(a)</p> <p>Wording added ‘on the grid in the Data Booklet.’</p> <p>Diagram enlarged.</p> <p>Axes labels moved to the top of the vertical axis and to the left on the horizontal axis.</p> <p>Grid intervals changed to 40 on the horizontal axis and 8 on the vertical axis.</p> <p>Open headed arrows.</p>	
5	<p>(b)</p> <p>Modified Question</p> <p>Value changed.</p> <p>350 to 340</p> <p>Leeway needed</p>	

**PAPER: 1ST0\_1H**

<b>Question</b>		<b>Modification</b>	<b>Mark scheme notes</b>
5	(c)	Modified Question Value changed. £350 000 to £340 000	
6	(a)	Wording added 'Look at the table for Question 6 in the Data Booklet. It shows a table that Gaby is using to research'. The wording 'Gaby is researching' removed. Table enlarged.	
6	(b)	Wording added 'in the Data Booklet'.	
7		Wording added 'Look at the table for Question 7 in the Data Booklet. It shows a table that'. The wording 'The table' removed. Table enlarged. Shading changed	

**PAPER: 1ST0\_1H**

<b>Question</b>	<b>Modification</b>	<b>Mark scheme notes</b>
7	(b) Wording added 'Look at the diagram for Questions 7(b) and 7(c) in the Data Booklet. It shows a'. The word 'The' removed. The word 'that' added. The wording 'on the grid below' removed. Wording added 'in the Data Booklet.' Axes labels moved to the top of the vertical axis and left on the horizontal axis. Diagram enlarged. Small squares removed. Grid intervals made each quarter on the horizontal. Crosses on the graph made solid square points. Pluses on the graph made solid circle points. Dashed line made thicker and longer	
8	Wording added 'Look at the table for Question 8 in the Data Booklet.' Table enlarged. Table turned vertical. Shading changed.	
10	Wording added 'Look at the table for Question 10 in the Data Booklet.' Table enlarged.	



**PAPER: 1ST0\_1H**

<b>PAPER: 1ST0_1H</b>			
<b>Question</b>		<b>Modification</b>	<b>Mark scheme notes</b>
11		Wording added 'Look at the table for Question 11 in the Data Booklet. It shows a grouped frequency table.' Table enlarged. The wording 'shown below' removed.	
11	(b)	Wording added 'in the Data Booklet'.	
11	(c)	Wording added 'in the Data Booklet'.	
13		Wording added 'Look at the table for Question 13 in the Data Booklet.' The word 'below' removed and replaced with 'in the Data Booklet'. Table enlarged. Shading changed.	
14		Wording added 'Look at the diagram for Question 14 in the Data Booklet. It shows an incomplete Venn diagram.' Diagram enlarged	

