GCSE
STATISTICS
8382/1F

Foundation Tier Paper 1

Mark scheme

June 2022

Version: 1.0 Final



Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation each associate analyses a number of students' scripts. Alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

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Glossary for Mark Schemes

GCSE examinations are marked in such a way as to award positive achievement wherever possible. Thus, for GCSE Statistics papers, marks are awarded under various categories.

If a student uses a method which is not explicitly covered by the mark scheme the same principles of marking should be applied. Credit should be given to any valid methods. Examiners should seek advice from their senior examiner if in any doubt.

M	Method marks are awarded for a correct method which could lead to a correct answer.
A	Accuracy marks are awarded when following on from a correct method. It is not necessary to always see the method. This can be implied.
B	Marks awarded independent of method.
ft	Follow through marks. Marks awarded for correct working following a mistake in an earlier step.
SC	Special case. Marks awarded for a common misinterpretation which has some mathematical worth.
M dep	A method mark dependent on a previous method mark being awarded.
B dep	A mark that can only be awarded if a previous independent mark has been awarded.
oe	Or equivalent. Accept answers that are equivalent. eg accept 0.5 as well as $\frac{1}{2}$
[a, b]	Accept values between a and b inclusive.
[a, b)	Accept values $a \leq$ value $< b$
3.14…	Accept answers which begin 3.14 eg 3.14, 3.142, 3.1416
Use of brackets	It is not necessary to see the bracketed work to award the marks.

Examiners should consistently apply the following principles

Diagrams

Diagrams that have working on them should be treated like normal responses. If a diagram has been written on but the correct response is within the answer space, the work within the answer space should be marked. Working on diagrams that contradicts work within the answer space is not to be considered as choice but as working, and is not, therefore, penalised.

Responses which appear to come from incorrect methods

Whenever there is doubt as to whether a student has used an incorrect method to obtain an answer, as a general principle, the benefit of doubt must be given to the student. In cases where there is no doubt that the answer has come from incorrect working then the student should be penalised.

Questions which ask students to show working

Instructions on marking will be given but usually marks are not awarded to students who show no working.

Questions which do not ask students to show working

As a general principle, a correct response is awarded full marks.

Misread or miscopy

Students often copy values from a question incorrectly. If the examiner thinks that the student has made a genuine misread, then only the accuracy marks (A or B marks), up to a maximum of 2 marks are penalised. The method marks can still be awarded.

Further work

Once the correct answer has been seen, further working may be ignored unless it goes on to contradict the correct answer.

Choice

When a choice of answers and/or methods is given, mark each attempt. If both methods are valid then M marks can be awarded but any incorrect answer or method would result in marks being lost.

Work not replaced

Erased or crossed out work that is still legible should be marked.

Work replaced

Erased or crossed out work that has been replaced is not awarded marks.

Premature approximation

Rounding off too early can lead to inaccuracy in the final answer. This should be penalised by 1 mark unless instructed otherwise.

Continental notation

Accept a comma used instead of a decimal point (for example, in measurements or currency), provided that it is clear to the examiner that the student intended it to be a decimal point.

Q	Answer	Marks	Comments
1	$\frac{1}{6}$	B1	

Q	Answer	Marks	Comments
2	Cleaning	B1	

Q	Answer	Marks	Comments
3	Skew	B1	
	Additional Guidance		
	Accept skew within the sentence, if two answers are given, the circled word takes precedence		

Q	Answer	Marks	Comments
4	500	B1	

Q	Answer	Marks	Comments
5(a)	Qualitative variable identified	B1	eg Colour, Flowers used, Base used, Customer name, Order reference
	Additional Guidance		
	Condone the data value included with the variable, eg		
	Base used Teapot	B1	
	Base Teapot	B1	
	Colour Red	B1	
	Red Colour	B1	
	Teapot	B0	

Q	Answer	Marks	Comments
5(b)(i)	Quantitative variable identified	B1	eg Selling price / Cost to make / Number of flowers used
	Additional Guidance		
	Condone the data value included with the variable, eg		
	Cost to make = £4.20	B1	
	£4.20	B0	

Q	Answer	Marks	Comments
5(b)(ii)	Discrete ticked	B1dep	Dependent on having identified a discrete value in 5(b)(i) eg Selling price / Cost to make / Number of flowers used
	Additional Guidance		
	£4.20 in 5(b)(i) and discrete ticked	B1	

Q	Answer	Marks	Comments
5(c)	Correct setup of pictogram with labels of Rose, Daisy, Lily and Carnation	B1	
	3 symbols for Rose or 2 symbols for Lily	B1	
	2.25 symbols for Daisy or 3.75 symbols for Carnation	B1	
	Fully correct pictogram with symbols vertically or horizontally aligned	B1	SC1 11 calculated or a total of 11 pictures
	Additional Guidance		
	Mark intention with any labels and alignment		
	Ignore any totals at the end of rows/columns		

Q	Answer	Marks	Comments
5(d)	(Roses =) 9 and (Daisies =) 4 and No, because 4 × 2 = 8 or No, because 9 ÷ 2 = 4.5 or No, because 9 ÷ 4 = 2.25 or No, because 9 – 4 = 5 (not 4) or No, because 4 + 4 = 8 (not 9)	B2	oe B1 No and (Roses =) 9 or (Daisies =) 4 or No, Roses is more than double Daisies or No, Daisies is less than half of Roses
	Additional Guidance		
	The 9 and/or the 4 may be seen next to the tally chart		
	Ignore any non-contradictory or irrelevant calculations or statements, eg No ticked and 4 × 2 = 8, not 9, 9 + 4 = 12 in the working		B2
	No ticked and 9 ÷ 2 = 4.5, you can't have half of a flower		B2
	Evaluations do not always have to be seen for B2, eg No, because 9 ÷ 2 does not equal 4		B2
	No ticked and 4 × 2 = 8, not 9 No ticked and 4 × 2 = 8		B2 B1
	Do not accept tallies instead of a number, eg No, 2 x IIII does not equal ~~III~~ IIII		B0

Q	Answer	Marks	Comments
6(a)	4	B1	
	Additional Guidance		
	Answer line takes precedence		
	$\frac{4}{29}$		B0
	4 out of (the) 29, 4 in 29, etc		B0

Q	Answer	Marks	Comments
6(b)	11 + 12 or 23 or 11 + 12 + 4 + 2 or 29	M1	
	$\frac{23}{29}$	A1	oe eg 0.79 or 79%
	Additional Guidance		
	Ignore any attempt to convert to decimal or percentage once the correct fraction has been seen, eg $\frac{23}{29}$ = 73.9%		M1A1
	Decimals or percentages must be correct to 2sf or better, eg 23 or 29 in working, answer 79.3% 23 or 29 in working, answer 80%		M1A1 M1A0

Q	Answer	Marks	Comments
6(c)(i)	0.27 and 0.14 or 27% and 14% or $\frac{56}{210}$ and $\frac{30}{210}$ or $\frac{4}{15}$ and $\frac{4}{28}$	B2	oe pair of probabilities in comparable form B1 $\frac{4}{15}$ or 0.27 or 27% or $\frac{2}{14}$ or 0.14 or 14%
	Correct statement to confirm that boys are nearly twice as likely to not complete homework compared to females, eg 0.14 × 2 = 0.28 which is just more than 0.27 or $\frac{56}{210}$ and $\frac{30}{210}$ and 56 is nearly twice as much as 30 or $\frac{4}{15}$ and $\frac{4}{28}$ and 28 is nearly twice as much as 15 or 4 is double 2 and 15 is very close to 14	B1	oe
	Additional Guidance		
	Decimals or percentages must be correct to 2sf or better		
	M = 27%, F = 14%, 14 x 2 = 28 so Miss Wardle is correct		B2B1
	M = 4/15, F = 2/14, 4 is double 2 and 15 is very close to 14 4 is double 2 and 15 is very close to 14		B1B1 B0B1
	4 out of 15, 2 in 14, etc (unless recovered)		B0
	4 is double 2		B0

Q	Answer	Marks	Comments
6(c)(ii)	Any valid statement, eg This is only one homework / one class / one set of data or Some students might have been absent	B1	oe
	Additional Guidance		
	Ignore any non-contradictory or irrelevant statements		
	Small sample size		B1
	Some may have completed their homework but forgotten it		B1
	She might not have asked everyone, some might have been ill She might not have asked everyone in the class She might not have asked everyone (too vague)		B1 B1 B0
	She may have recorded the information wrong She may be wrong		B1 B0
	It's only one piece of homework so it's not accurate		B0
	Not equal numbers of males and females		B0
	This might be a one-off		B0
	The data won't be exactly the same every time		B0
	It doesn't support all of the students		B0
	The homework may have been too difficult		B0

Q	Answer	Marks	Comments
7	10.5	B1	

Q	Answer	Marks	Comments
8(a)	Horizontal axis label of 'Donations'	B1	
	Vertical axis label of 'Shoppers'	B1	
	Plot at (4200, 250)	B1	$\pm\frac{1}{2}$ square tolerance

Q	Answer	Marks	Comments
8(b)	A scatter diagram is not appropriate or The diagram is not appropriate, she is only investigating shoppers	B1	oe
	Additional Guidance		
	For scatter diagram, accept scatter graph, condone scatter chart		
	Naming an appropriate diagram to use implies that this diagram is wrong, eg Should have used a bar chart, only investigating the number of shoppers Should have used a bar chart		B1 B0
	There is no need to measure donations		B0
	The diagram's not suitable		B0
	Not appropriate, only measuring one thing Not appropriate		B1 B0

Q	Answer	Marks	Comments
9	Scatter diagram	B1	

Q	Answer	Marks	Comments
10(a)	Any suitable hypothesis, eg European countries have the lowest birth rates	B1	oe eg The rest of the world have higher birth rates than European countries
	Additional Guidance		
	Condone the use of the word lower instead of lowest, etc		
	Africa has the highest birth rates (no reference to European countries)		B0
	European countries might have the lowest birth rates		B0

Q	Answer	Marks	Comments
10(b)(i)	Choropleth map	B1	
	Additional Guidance		
	Condone choropleth		B1
	Condone choropleth chart/diagram/graph, etc		B1

Q	Answer	Marks	Comments
10(b)(ii)	(Yes,) it supports the hypothesis	B1ft	oe ft their 10(a)
	Additional Guidance		
	Must have a hypothesis in 10(a) to comment on in 10(b)(ii)		
	It's (likely to be) correct		B1
	Yes, it's correct Yes, it is mostly correct Yes, it might be correct Yes		B1 B1 B0 B0

Q	Answer	Marks	Comments
10(c)(i)	No, he is wrong as someone else has collected the data	B1	oe
	Additional Guidance		
	If neither box is ticked, the reason given may imply no		
	No, you collect primary data yourself		B1
	No, he didn't collect it himself		B1
	No, the Internet gives secondary data No, it's secondary data No, it's from the Internet		B1 B1 B0

Q	Answer	Marks	Comments
10(c)(ii)	The highest value on the map is 45	B1	oe
	Additional Guidance		
	Condone use of the word average, eg The highest average birth rate on the map is 45		B1
	Honduras is shaded grey so can't be 55.8 Honduras is shaded grey which is 10.1-15 / 15.1-20 / 20.1-30 Honduras is shaded grey		B1 B1 B0
	Honduras is an outlier		B0

Q	Answer	Marks	Comments
10(d)	Labels for all ten countries and Horizontal axis label of 'Country' and Vertical axis label of 'Birth rate'	B1	oe
	All 4 bars to correct heights	B2	$\pm\frac{1}{2}$ square tolerance B1 2 or 3 bars to correct heights
	All 4 bars of equal width and gaps of equal width between bars	B1	
	Additional Guidance		
	Condone a missing label of 'Country' for the first B mark		
	Accept abbreviations for a country's name, eg Arg or A for Argentina but not 1		
	Correct heights are: Germany 8.5 Honduras 22.8 Italy 8.7 Japan 7.9		

Q	Answer	Marks	Comments
10(e)	Different living conditions or Availability of contraception or Education levels or High infant mortality rate or Cultural/Religious views	B1	oe
	Additional Guidance		
	Ignore any non-contradictory or irrelevant statements		
	Laws on abortion Laws		B1 B0
	Any reference to wealth must be substantiated, eg Some poorer countries use child labour Some countries are richer than others		 B1 B0
	Varying use of birth control Birth control		B1 B0
	Famine		B1
	War		B1
	Better healthcare Healthcare		B1 B0
	Some countries are more developed than others		B0
	Bigger population		B0

Q	Answer	Marks	Comments
10(f)(i)	8.5	B1	
	their 8.5 × 80 000 000 (÷ 1000) or 680 000 000 (÷ 1000)	M1	oe their 8.5 must be a birth rate from the table or 22.8
	680 000	A1	
	Additional Guidance		
	Embedded answer		B1M1A0

Q	Answer	Marks	Comments
10(f)(ii)	Population and/or birth rate is rounded	B1	oe
	Additional Guidance		
	The given population is approximate		B1
	The population is ever changing		B0
	Some births have not been recorded		B0

Q	Answer	Marks	Comments
10(g)	The source(s) (of his data)	B1	oe
	Additional Guidance		
	The author		B1
	A link to the articles (the website link)		B1
	Where he got the data from (ambiguous)		B0

Q	Answer	Marks	Comments
11	Allocate each square a number from 1 to 25	B1	oe
	(Shuffle the cards and without looking) pick a card at random	B1	oe
	Pick the square that is indicated by the card	B1	oe
	Additional Guidance		
	For the third mark, candidates must link the card picked to a square, eg Number the squares from 1 to 25, randomly pick a card, use this square Number the squares from 1 to 25, randomly pick a card, use this card		B1B1B1 B1B1B0
	Using a random number generator can score up to B2, eg Number each square from 1 to 25, use a random number generator to select a number from 1 to 25, pick this square Number each square from 1 to 25, use a random number generator, pick this square Number each square, use a random number generator, pick this square		B1B0B1 B1B0B0 B0B0B0

Q	Answer	Marks	Comments
12	B	B1	

Q	Answer	Marks	Comments
13(a)	Two correct statements from: U certificates rose and have fallen again or U certificates have increased (slightly) PG certificates have risen 12 certificates have risen 15 certificates have risen 18 certificates have remained fairly steady (or risen and have fallen again) or 18 certificates have decreased (slightly) With the exception of 2013, the number of '15' rated movies released was always bigger than any of the other rated movies released There were always fewer 18 rated movies (released than any other rating of movie)	B2	oe B1 one correct statement

Additional Guidance	
Answers referring to just 2008 and 2018 can still score B2, eg (From 2008 to 2018,) 12 certificates have risen, 18 certificates have decreased (slightly)	B2
Two correct statements can be given in one comment, eg PG certificates have risen, 15 certificates have risen	B2
Do not ignore incorrect statements for B2, eg 12 certificates have risen, 15 certificates have risen, 15 certificates were always the highest	B1
Answers must refer to a certificate, eg The total number of films released went down in 2009	B0
15 certificates were nearly always the highest 15 certificates were often the highest 15 certificates were sometimes the highest 15 certificates were always the highest	B1 B1 B0 B0

Q	Answer	Marks	Comments
13(b)	Correct method for one percentage eg $\frac{69}{69+117+178+227+48}\times 100$	M1	oe
	One correct percentage	A1	
	Correct value for all 10 percentages	A1	
	A diagram that meets the following criteria: vertical axis scale up to at least 100 with at least one intermediate value between 0 and 100 labelled both bars to total 100% bars of equal width and not joined to each other appropriate key or equivalent	B2	B1 at least one criterion met
	2008 bar correct	B1ft	ft their five percentages with M1A1 awarded ±1 square tolerance
	2018 bar correct	B1ft	ft their five percentages with M1A1 awarded ±1 square tolerance
	Additional Guidance		
	Fully correct diagram, with no working, is full marks		
	Percentages must be correct to the nearest whole number or better, 5sf answers are: 2008: 10.798%, 18.310%, 27.856%, 35.524%, 7.5117% 2018: 7.2464%, 16.522%, 34.010%, 37.874%, 4.3478%		
	Cumulative percentages from U to 18 (correct to 1dp) are: 2008: 10.8%, 29.1%, 57.0%, 92.5%, 100.0% 2018: 7.2%, 23.8%, 57.8%, 95.7%, 100.0%		
	Cumulative percentages from 18 to U (correct to 1dp) are: 2008: 7.5%, 43.0%, 70.9%, 89.2%, 100.0% 2018: 4.3%, 42.2%, 76.2%, 92.8%, 100.0%		

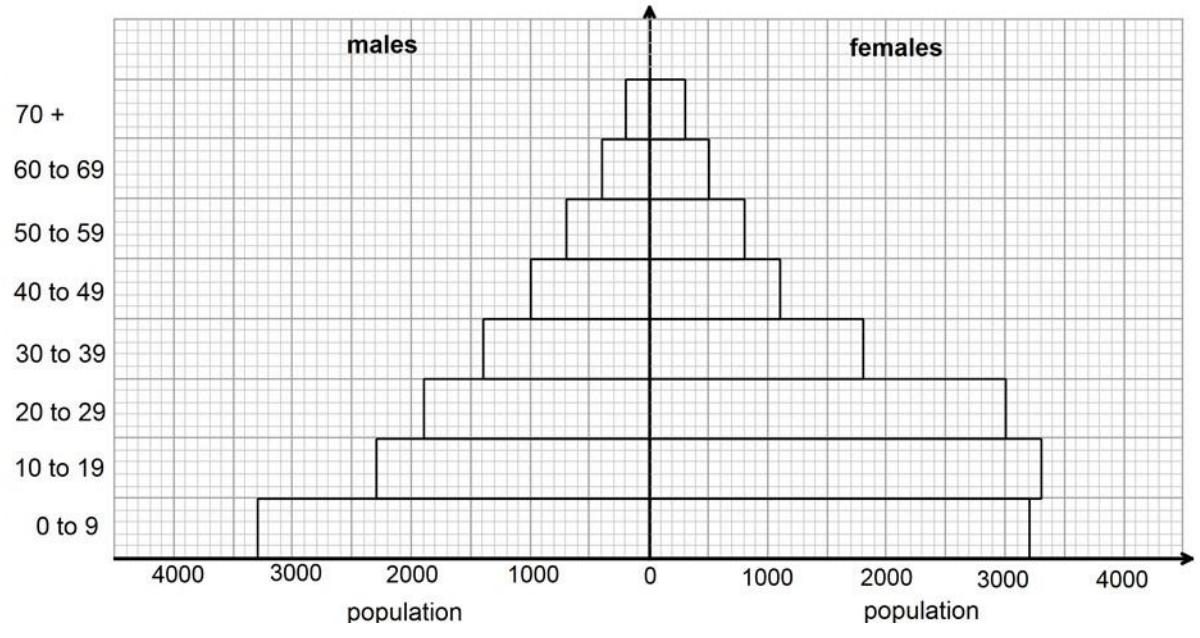
Q	Answer	Marks	Comments
13(c)	Secondary ticked (or implied) and reference to the difficulty of collecting representative data himself or Primary ticked (or implied) and reference to getting information specific to Northtown	B1	oe
	Additional Guidance		
	If neither box is ticked, the reason given may state primary or secondary		
	Primary because in other towns it might be different	B1	
	Primary as it's more reliable as it will be just for Northtown Primary as it's more reliable	B1 B0	
	Primary as it's more accurate	B0	
	Secondary as primary would take too long / cost too much	B1	
	Secondary as the cinema has no customers Secondary as it's a new cinema	B1 B0	
	Secondary as it's easier to collect Secondary as it's easier	B1 B0	
	Secondary as it's more efficient (why is it more efficient?)	B0	
	Secondary so he knows what films to buy	B0	

Q	Answer	Marks	Comments
13(d)	The values do not add up to 100% (so must have been rounded)	B1	oe eg The values add up to 101% (so must have been rounded)
	Additional Guidance		
	The percentages have been rounded to the nearest whole number It's been rounded to the nearest whole number (ambiguous)	B1 B0	
	It's an estimate	B0	

Q	Answer	Marks	Comments
13(e)(i)	The value for 18 certificate films is 0(%)	B1	oe
	Additional Guidance		
	Nobody watched the 18 certificate films		B1

Q	Answer	Marks	Comments
13(e)(ii)	The films may have been shown but no-one went to see them (or very few did) or The value of 0% is actually not exactly zero, it was rounded down	B1	oe
	Additional Guidance		
	Maybe the film rated 18 (was shown but) didn't appeal to anyone		B1
	This was only one week, 18 certificate films could have been on last week (missed the point)		B0

Q	Answer	Marks	Comments
14	Two valid criticisms, eg Too many sections Percentages/angles not visible for some countries Should be in a bar chart	B2	oe B1 one valid criticism
	Additional Guidance		
	More countries should have been grouped together		B1
	Too many labels / Too many countries		B1
	Not easy to read as there's too many countries Not easy to read due to the shading Not easy to read		B1 B0 B0
	Shouldn't have used a pie chart, should have done a bar chart Shouldn't have used a pie chart as it's hard to read		B1 B0
	Other should have more countries Other should be bigger (ambiguous)		B1 B0
	The pie chart should be bigger so that you can see the angles better The pie chart should be bigger		B1 B0

<table>
<tr><th>Q</th><th>Answer</th><th>Marks</th><th>Comments</th></tr>
<tr><td rowspan="6">15(a)</td><td>Labels of
(population) and females
and
the correct scale with a minimum of 1000, 2000 and 3000 labelled</td><td>B1</td><td>oe</td></tr>
<tr><td>Bars drawn correctly</td><td>B2</td><td>Assume scale is identical to the scale for males if no scale is added
$\pm\frac{1}{2}$ square tolerance
B1
4 to 7 bars correct for their scale</td></tr>
<tr><td colspan="3">Additional Guidance</td></tr>
<tr><td colspan="2">Condone missing population (as it appears on the left)</td><td></td></tr>
<tr><td colspan="2">Condone missing 4000 on the scale</td><td></td></tr>
<tr><td colspan="3">
</td></tr>
</table>

Q	Answer	Marks	Comments
15(b)	Any correct comparison of populations in the two years, eg The population (aged 20-29) is greater (in 1961 than in 1851)	B1	oe eg The number of males (or females) (aged 20-29) is greater (in 1961 than in 1851)
	Any correct comparison between genders, eg In 1851, there were more females than males (in the 20-29 age group) or (In 1961,) there were more males than females (in the 20-29 age group) or The gender gap / range has decreased or The gender gap has reversed	B1	oe
	Additional Guidance		
	Condone any incorrect calculations with a correct statement		
	Ignore any non-contradictory or irrelevant statements		
	The males have gone up, the females have gone up, the males have gone up by more than the females		B1B0
	There's a bigger population (now) There was a smaller population before They've both more than doubled There was a smaller population in 1851 There was a smaller population		B1 B1 B1 B1 B0

Q	Answer	Marks	Comments
16(a)(i)	$\frac{150000-135000}{1000}\times 0.05$	M1	oe
	0.75	A1	oe eg 75%
	Additional Guidance		
	Do not ignore further work, eg 15 × 0.05 = 0.75, answer 99.25		M1A0
	0.75%		M1A0

Q	Answer	Marks	Comments
16(a)(ii)	their 0.75 × their 0.75	M1	oe
	$\frac{9}{16}$ or 0.5625 or 0.56 or 0.563 or 56.25% or 56% or 56.3%	A1ft	oe equivalent fraction ft their 16(a)(i)
	Additional Guidance		
	Answers must be correct to 2sf or better		
	Ignore any attempt to round after the correct answer seen, eg 0.5625 = 0.562		M1A1

Q	Answer	Marks	Comments
16(a)(iii)	Selling in one month is independent to selling in another	B1	oe eg months are independent
	Additional Guidance		
	Condone use of 'probability'/'chance' for 'risk'		
	The risk each month is the same The risk stays the same over time (implies each month) The risk is (still) the same		B1 B1 B0
	The risk of not selling in month one is the same as the risk of not selling in month two		B1
	The risk of not selling in one month is the same as not selling in two months		B0
	She doesn't sell the house in the first month		B0
	The price stays the same		B0

Q	Answer	Marks	Comments
16(b)(i)	**Alternative method 1 – Starting with £135 000**		
	1 ÷ 0.05 or 20 or 20 000	M1	oe
	(£)155 000	A1	
	Alternative method 2 – Starting with £150 000		
	5 (× 1000) or 5000	M1	oe
	(£)155 000	A1	

Q	Answer	Marks	Comments
16(b)(ii)	Any valid reason, eg Risk (of not selling) will change over time or Prices will probably go up making that price more attractive or Natalie might accept a lower offer even though it is on sale at that price	B1	oe
	Additional Guidance		
	Somebody might be willing to pay asking price		B1
	There's no time limit (so it will sell eventually)		B1
	House prices may rise		B1
	The house might be in a desirable location		B1
	The local schools may be outstanding		B1
	House/Home improvements		B1
	It's only a prediction / predicted risk / estimate It's only a model		B1 B1
	It might be a low price for buying a house (in that area) It's a low price for buying a house (in that area)		B1 B0
	(The housing) market may change		B0
	Inflation		B0

Q	Answer	Marks	Comments
17(a)	Changes in prices (of goods/services)	B1	oe
	Additional Guidance		
	Changes in the price of (everyday) things/products The price of goods/things		B1 B0
	It measures the change(s) in price(s) It measures the changes in prices including mortgages		B1 B0
	Measures inflation of prices/products/services (Changes in) inflation		B1 B0
	It measures the price of goods		B0
	Consumer Price Index		B0

Q	Answer	Marks	Comments
17(b)	5	B1	

Q	Answer	Marks	Comments
17(c)	Any correct statement referring to the trend of both from 2010 to 2018 eg, both private and public sectors increased (from 2010 to 2018)	B1	oe
	Any correct statement referring to pay before and after 2014 eg, before 2014, public was higher but after 2014 private was higher	B1	oe

Additional guidance for this question is on the next page

17(c)	**Additional Guidance**	
	Ignore any non-contradictory or irrelevant statements	
	Index values for Jan 2010, if referred to, must be 100 Acceptable Index values for May 2018: Public sector = [112, 115) Private sector = [116, 119]	
	If Index values are used as evidence, they must be correct, eg	
	Private increased to 118, public only increased to 114, before 2014 public was higher, after 2014 private was higher	B1B1
	Private increased to 118, public only increased to 114	B1B0
	Private increased to 118, public only increased to 115	B0B0
	Private increased to 120, public only increased to 115	B0B0
	Private increased to 120, public also increased	B0B0
	Statements must not refer to amounts of pay, eg	
	Private sector has gone up 18(%), public sector has gone up by 14(%), so private sector pay has gone up the most	B1B0
	Private sector has gone up, public sector has gone up, private sector has gone up by a bigger amount (implies a bigger percentage)	B1B0
	Private sector has gone up by £18, public sector has gone up by £14, so private sector has gone up the most	B0B0
	They both increase (implies from 2010 to 2018)	B1B0
	They both increase, private increases at a faster rate	B1B0
	Public increased at a faster rate until 2014, then the private sector increased at a much faster rate (than the public sector)	B1B0
	They both increased, private overtook public in 2014 and has been higher ever since	B1B1
	Private overtook public in 2014 and has been higher ever since	B0B1
	Private overtook public in 2014 (only looking at one point)	B0B0
	There's positive correlation between Index and Time	B1B0
	Both have positive correlation	B0B0
	The private sector showed a more positive trend than public sector	B1B0
	The trends increase	B1B0
	The trend increases	B0B0

Q	Answer	Marks	Comments
17(d)	$\frac{100}{120}$ (× 100) or 0.83(3…)	M1	oe
	83(.3…)	A1	oe
	83(.3…) and (Jim's) first statement is correct and (Jim's) second statement is incorrect	A1	oe
	Additional Guidance		
	Condone use of %		
	Ignore $\frac{120}{100}$ (may be seen as an attempt to validate the first statement)		
	83 and this is not 80 (to the nearest whole number)		M1A1