OCR
Oxford Cambridge and RSA

GCSE

Mathematics B (Linear)

Component **J567/04:** Mathematics Paper 4 (Higher)

General Certificate of Secondary Education

Mark Scheme for June 2015

Annotations used in the detailed Mark Scheme.

Annotation	Meaning
✓	Correct
✘	Incorrect
BOD	Benefit of doubt
FT	Follow through
ISW	Ignore subsequent working (after correct answer obtained), provided method has been completed
M0	Method mark awarded 0
M1	Method mark awarded 1
M2	Method mark awarded 2
A1	Accuracy mark awarded 1
B1	Independent mark awarded 1
B2	Independent mark awarded 2
MR	Misread
SC	Special case
∧	Omission sign

These should be used whenever appropriate during your marking.

The **M**, **A, B** etc annotations must be used on your standardisation scripts for responses that are not awarded either 0 or full marks.
It is vital that you annotate these scripts to show how the marks have been awarded.
It is not mandatory to use annotations for any other marking, though you may wish to use them in some circumstances.

Subject-Specific Marking Instructions

1.   **M** marks are for using a correct method and are not lost for purely numerical errors.
     A marks are for an accurate answer and depend on preceding **M** (method) marks. Therefore **M0 A1** cannot be awarded.
     B marks are independent of **M** (method) marks and are for a correct final answer, a partially correct answer, or a correct intermediate stage.
     SC marks are for special cases that are worthy of some credit.

2.   Unless the answer and marks columns of the mark scheme specify **M** and **A** marks etc, or the mark scheme is 'banded', then if the correct answer is clearly given and is not from wrong working **full marks** should be awarded.

     Do not award the marks if the answer was obtained from an incorrect method, ie incorrect working is seen and the correct answer clearly follows from it.

3.   Where follow through (**FT**) is indicated in the mark scheme, marks can be awarded where the candidate's work follows correctly from a previous answer whether or not it was correct.

Figures or expressions that are being followed through are sometimes encompassed by single quotation marks after the word *their* for clarity, eg FT 180 × (*their* '37' + 16), or FT 300 − √(*their* '5^2 + 7^2'). Answers to part questions which are being followed through are indicated by eg FT 3 × *their* (a).

For questions with FT available you must ensure that you refer back to the relevant previous answer. You may find it easier to mark these questions candidate by candidate rather than question by question.

4.   Where dependent (**dep**) marks are indicated in the mark scheme, you must check that the candidate has met all the criteria specified for the mark to be awarded.

5.   The following abbreviations are commonly found in GCSE Mathematics mark schemes.

-    **cao** means **correct answer only**.
-    **figs 237**, for example, means any answer with only these digits. You should ignore leading or trailing zeros and any decimal point eg 237000, 2.37, 2.370, 0.00237 would be acceptable but 23070 or 2374 would not.
-    **isw** means **ignore subsequent working** (after correct answer obtained).
-    **nfww** means **not from wrong working**.
-    **oe** means **or equivalent**.
-    **rot** means **rounded or truncated**.
-    **seen** means that you should award the mark if that number/expression is seen anywhere in the answer space, including the answer line,
      even if it is not in the method leading to the final answer.
-    **soi** means **seen or implied**.

6.   Make no deductions for wrong work after an acceptable answer unless the mark scheme says otherwise, indicated for example by the instruction 'mark final answer'.

7.   As a general principle, if two or more methods are offered, mark only the method that leads to the answer on the answer line. If two (or more) answers are offered, mark the poorer (poorest).

8.   When the data of a question is consistently misread in such a way as not to alter the nature or difficulty of the question, please follow the candidate's work and allow follow through for **A** and **B** marks. Deduct 1 mark from any **A** or **B** marks earned and record this by using the MR annotation. **M** marks are not deducted for misreads.
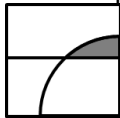
9.   Unless the question asks for an answer to a specific degree of accuracy, always mark at the greatest number of significant figures even if this is rounded or truncated on the answer line. For example, an answer in the mark scheme is 15.75, which is seen in the working. The candidate then rounds or truncates this to 15.8, 15 or 16 on the answer line. Allow full marks for the 15.75.

10.   If the correct answer is seen in the body and the answer given in the answer space is a clear transcription error allow full marks unless the mark scheme says 'mark final answer' or 'cao'. Place the annotation ✓ next to the correct answer.

If the answer space is blank but the correct answer is seen in the body allow full marks. Place the annotation ✓ next to the correct answer.

If the correct answer is seen in the working but a completely different answer is seen in the answer space, then accuracy marks for the answer are lost. Method marks would still be awarded. Use the M0, M1, M2 annotations as appropriate and place the annotation ✗ next to the wrong answer.

11.   Ranges of answers given in the mark scheme are always inclusive.

12.   For methods not provided for in the mark scheme give as far as possible equivalent marks for equivalent work. If in doubt, consult your Team Leader.

13.   Anything in the mark scheme which is in square brackets […] is not required for the mark to be earned, but if present it must be correct.

MARK SCHEME

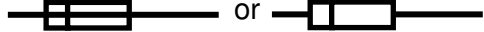| Question			Answer	Marks	Part marks and guidance	
1	(a)		1.61 final answer	2	**M1** for 1.60[8…] seen Or for *their* answer seen to more than 2dp corrected to 2dp OR **SC1** for answer 3.96 or 5.35 or 5.94	Both rounded and unrounded value must be seen
	(b)		6.4	2	**M1** for $2 \times 1.8 - 4 \times {}^-0.7$ or for 3.6 or 2.8 or $^-2.8$ seen	Accept any equivalent to 6.4 for 2 marks
	(c)		26	1		Not 26^3
	(d)		0.4 or $\dfrac{2}{5}$	1	Accept any equivalent fraction	Not $\dfrac{1}{2.5}$
	(e)		$0.\dot{7}$ or 0.777[7…]	1		All decimal digits seen must be 7 to award mark Accept any clear indication for recurring notation eg $0.\dot{7}\dot{7}$, 0.777' or 0.7^r, but do not accept 0.7*r*
2	(a)	(i)	49	1		
		(ii)	14.5	2	**M1** for 14 and/or 15 as answer or unambiguously identified in working space Or for 4.5 as answer Or for figs 145 as answer After **M0**, **SC1** for second 14 and/or first 15 unambiguously identified in table	e.g. second 4 and/or first 5 ringed in 10 row
		(iii)	$\dfrac{1}{10}$ final answer	2	**M1** for $\dfrac{3}{30}$ **oe** Or for converting *their* $\dfrac{n}{30}$ to its simplest form	Accept 0.1 for **M1** *n* < 30, both unsimplified and simplified fractions must be seen, and simplification must be possible

	Question		Answer	Marks	Part marks and guidance	
	(b)		3.6 **nfww**	4	**B1** for midpoints **soi** [1, 3, 5, 7, 9] **M1** for 19×1 + 12×3 + 8×5 + 7×7 + 4×9 condone one error or omission **M1 dep** for *their* 180 ÷ *their* 50	Condone one error or omission **FT** *their* 'midpoints' where each midpoint is any point/endpoint in the interval 19 + 36 + 40 + 49 + 36 or 180 seen implies **B1M1** For **FT** eg endpoints used gives 38 + 48 + 48 + 56 + 40 implies **B0M1** *Their* 50 is from attempt to sum frequencies Attempt to divide *their* sum by *their* 50 implied by correct answer to division after total seen, dependent on previous **M1**
	(c)		31.7 **cao**	3	**M1** for 158.66 ÷ 500 [× 100] **A1** for 31.73[2] or 0.317 After **A0**, **SC1** for *their* answer seen to more than 3sf rounded to 3sf or *their* decimal seen converted to percentage	**M1** implied by answer 0.3173[2] **SC1** may be awarded after **M1** or **M0**
3	**(a)**		Perpendicular bisector of AD with correct arcs with two intersections Arc centre C radius 4.5 cm Correct area shaded	2 1 1	**B1** for bisector with insufficient or no arcs **FT** *their* bisector parallel to AB and *their* arc centre C	For tolerance check distances on perimeter of rectangle Bisector 34 to 38 mm from A **and** B Arc 43 to 47 mm from C Accept solid or dashed lines and arcs Shaded part should be as below
	(b)		4.71[2…] or 4.713	2	**M1** for 2 × π × 0.75	Answer 4.7[…] implies **M1** if more accurate answer not seen

Question			Answer	Marks	Part marks and guidance	
	(c)		[Interior] angle of [regular] hexagon = 120° 3 × 120° = 360°	2	**B1** for [Interior] angle of [regular] hexagon = 120° Or [sum of angles at] point = 360° Or [regular] hexagons tessellate	If any incorrect statement, award max **B1** Explanation may be clarified by their diagram
4	(a)		$\dfrac{43}{160}$ or 0.268[…] or 0.269 or 0.27	1	Award mark if $\dfrac{43}{160}$ seen	Condone 26.8[…]% or 26.9% or 27%, must have % symbol or correct fraction seen
	(b)		285 or 286	2	**M1** for $\dfrac{38}{160}$ or $\dfrac{1200}{160}$ or $\dfrac{160}{1200}$ **oe**	**M1** implied by 7.5 seen or by answer 285.6
5			Ruled straight line passing at least between (-5, 0) and (5, 5)	3	**B2** for correct ruled short or dashed line Or two correct points plotted OR **B1** for one correct pair of values with integer x or y **soi**	Tolerance 2mm radially by eye for plots <table><tr><td>x</td><td>-5</td><td>-3</td><td>-1</td><td>0</td><td>1</td><td>3</td><td>5</td></tr><tr><td>y</td><td>0</td><td>1</td><td>2</td><td>2.5</td><td>3</td><td>4</td><td>5</td></tr></table> **B1** may be implied by one correct plot or their straight line clearly through a correct point for integer x or y
6			$P = 90$ $Q = 60$ $k = 2$	3	**B2** for two correct answers OR **B1** for one correct answer **M1** for $2^2 \times 3^2 \times 5$ **soi** or $180 = 2^k \times 3^k \times 5$ or better	For **B2** or **B1** condone P = 2 × 3² × 5, Q = 2² × 3 × 5, but for 3 marks P, Q must be evaluated May be implied by factor tree Eg 36 = $2^k \times 3^k$ or 6^k = 36 seen
7	(a)		$[f =] \dfrac{e+5}{7}$ **oe** final answer	2	**M1** for $e + 5 = 7f$ **oe** or $\dfrac{e}{7} = f - \dfrac{5}{7}$ **oe** OR **SC1** for answer $e + \dfrac{5}{7}$ or $e + 5 \div 7$ or $\dfrac{e}{7} + 5$ or $\dfrac{e-5}{7}$	Accept e.g. (e + 5)/7 for 2 marks Or $\dfrac{-5-e}{7}$ for **SC1**

Question			Answer	Marks	Part marks and guidance	
	(b)		$x > 4$ final answer	2	**M1** for $5x > 17 + 3$ or for $x > \dfrac{b}{a}$ after $ax > b$ seen, $a \neq 1$, $b \neq 0$ OR **SC1** for answer 4 or $x \ldots 4$ with any incorrect equality or inequality symbol or answer $5 \times 4 - 3 > 17$ or $5 \times 4 - 3 = 17$	Condone use of = or incorrect inequality symbol for method mark
8	(a)	(i)	Correct translation Vertices (-5, 4), (-6, 5), (-4, 6)	2	**B1** for correct horizontal or vertical movement **SC1** for triangle with vertices (-4, 3), (-3, 2), (-2, 4)	Clear intention Use overlay
		(ii)	(-4, 8) 3	2	**B1** for one correct **Max 1 mark if second transformation mentioned**	Condone missing brackets in coordinates, Do not allow a vector Condone 3 times (bigger) or ×3 etc Condone sf +3 Condone 1 : 3 but not 3 : 1
	(b)	(i)	40	1		
		(ii)	96	1		
9	(a)		[$S = $] $5n + 1$ **oe**	2	**M1** for $5n$ **soi**	Condone any alternative letters in place of n and S but eg $n = 5n + 1$ scores **M1** only Condone $n5$ for $5n$ for 2 or 1 marks

Question			Answer	Marks	Part marks and guidance	
	(b)		$n = 17$ $v = 86$	4	**B3** for $n = 17$ **or** $v = 86$ or 17th term or value 86 stated **OR** <u>Algebraic method:</u> **M1** for $120 - 2n =$ *their algebraic* '$5n + 1$' **M1** for correct simplification of *their* equation to $an = b$ **OR** <u>T & I method:</u> **M1** for one correct trial of same integer n in both sequences **M1** for second correct trial of different integer n in both sequences **OR** <u>Sequence method:</u> **M1** for one sequence continued for at least 10 more terms **M1** for the other sequence continued until a common term is reached **AND** **B1** for *their v* resulting from correct substitution of *their* answer for n into $120 - 2n$ or $5n + 1$ or *their* '$5n + 1$' **soi**	Method marks may only be awarded in one of the three alternatives, mark to candidate's advantage Correct or FT their linear expression in n only eg **M2** scored for $7n = 119$ Correct or FT *their* expression from (a) For this method, sequence must be correct **not** FT their (a) Condone one wrong value in **only** one sequence *Their n* must be positive integer Correct substitution seen or implied by correct evaluation of *their v* from *their n*
10	(a)		30.8[0]	3	**M2** for $34.65 \div 1.125$ **oe** OR **B1** for 1.125 or 112.5% seen	Implied by $\dfrac{112.5}{100}$ or $\dfrac{100}{112.5}$ seen

	Question		Answer	Marks	Part marks and guidance	
	(b)		6184.75 or 6184.74 or 6184.76 final answer	3	**M2** for 5760×1.024^3 **oe** OR **M1** for 5760×1.024^n **oe** Or for $5760 \times$ *their* 1.024^3 **oe** After **M0**, **SC1** for answer 6174.72	Implied by answer 6184.74 to 6184.8 Allow **M2** for step by step method for total after exactly 3 years Where $n \geq 1$, $n \neq 3$ **M1** implied by 5898.24 seen Where $1 <$ *their* $1.024 < 2$
11	**(a)**		5.099[…] or 5.1[0] or $\sqrt{26}$ following use of Pythagoras	4	**M1** for triangle ABC drawn correctly Or pair of horizontal and vertical differences for *their* AB, BC or AC Or longest side AC identified AND **M2** for calculation for *their* hypotenuse $\sqrt{5^2 + 1^2}$ or $\sqrt{3^2 + 2^2}$ **soi** OR **M1** for attempt to use Pythagoras to find hypotenuse **soi** by *their* a^2 + *their* b^2	Condone translation, rotation or reflection of overlay FT *their* identified values of sides in a relevant right-angled triangle Where a and b are integers < 10 Any of the following seen implies **M1M2** $\sqrt{(7-2)^2 + (4-3)^2}$ or $\sqrt{26}$ $\sqrt{(7-4)^2 + (4-6)^2}$ or $\sqrt{13}$ $\sqrt{(4-2)^2 + (6-3)^2}$ or $\sqrt{13}$
	(b)	**(i)**	(3, 3, 3)	1		
		(ii)	C	1		

Question			Answer	Marks	Part marks and guidance	
12	(a)		Correct complete box plot	3	**B1** for min 0, max 54 indicated **B1** for LQ at 5, UQ at 22 indicated **B1** for median 8 indicated, dependent on being greater than their LQ **Max 2 marks if box plot incomplete or incorrect**	Use overlay, half square accuracy Indication may be a dot/cross for up to 2 marks Minimum acceptable for complete box plot:
	(b)	(i)	15	1		
		(ii)	60% in Sonia's survey is less than 75% Or 225 people in national survey is more than 180 people in Sonia's survey	4	**M1** for at least 3 of 33, 62, 85, 60, 45, 15 **M1 dep** for sum of *their* 6 frequencies **M1** for 0.75 × *their* '300' Or *their* (33 + 62 + 85) ÷ *their* '300' **M1** for correct comparison of *their* percentage with 75% or *their* number of people with *their* 225 **Max 3 marks if errors in working**	Frequencies may be seen on graph 300 seen implies **M1M1** or 180 seen implies **M1** Dependent on previous method mark, may be implied by correct total of their 6 seen frequencies accept eg $\dfrac{180}{300}$ See exemplars for acceptable comments Allow equivalent method marks if areas of bars used eg 82.5, 155, 212.5, 150, 112.5, 37.5 leading to $\dfrac{450}{750}$

Question	Answer	Marks	Answer
13*	Fully correct and clear method to find pitch angle of roof leading to identification of Pantile and Low Profile tiles. Clear correct calculations using correct trig statements Angle calculated must be identified as pitch angle or x and must be correct and given to at least 2sf	5	eg pitch angle $= \tan^{-1}\left(\dfrac{0.79}{1.77}\right) = 24.1°$ or $24.05[\ldots]°$ Pantile and low profile tiles suitable for this angle Alternative methods: $\sin^{-1}\left(\dfrac{0.79}{1.94}\right) = 24.0[3\ldots]°$ or $\cos^{-1}\left(\dfrac{1.77}{1.94}\right) = 24.2°$ or $24.16[\ldots]°$
	Pantile and low profile tiles identified with correct angle seen, working not clearly set out and/or angle not identified as pitch OR Correct pitch angle found with clear correct calculations but no/incorrect identification of tiles OR Clear correct calculations with method with max one error leading to correct choice of tiles for *their* angle	4-3	Correct angle found with no/incorrect identification of tiles and working not clearly set out OR Correct inverse trig statement seen $\tan^{-1}\left(\dfrac{0.79}{1.77}\right)$ or $\sin^{-1}\left(\dfrac{0.79}{1.94}\right)$ or $\cos^{-1}\left(\dfrac{1.77}{1.94}\right)$
	Correct trig statement for x or *their* identified angle seen $\tan = \dfrac{0.79}{1.77}$ or $\sin = \dfrac{0.79}{1.94}$ or $\cos = \dfrac{1.77}{1.94}$ OR Attempt at scale drawing with reasonable scale identified OR Attempt to use trigonometry or scale drawing **and** correct choice of tiles for their angle	2-1	Attempt to use trigonometry or attempt at scale drawing eg incorrect statement using trigonometry and at least one of 1.94, 1.77 or 0.79 OR Correct choice of tiles for *their* stated angle
	Allow equivalent marks for use of sine rule or cosine rule: eg $\sin^{-1}\left(\dfrac{0.79\sin 90}{1.94}\right) = 24.0[3\ldots]$ or $\cos^{-1}\left(\dfrac{1.94^2 + 1.77^2 - 0.79^2}{2\times 1.94 \times 1.77}\right) = 24.0[3\ldots]$ Allow equivalent marks for reverse calculations using pitch angles, for full marks both slate and pantiles must be considered: Eg Min height for each tile, must be compared with 0.79: plain = 1.77 tan 35 = 1.23, slate = 1.77 tan 25 = 0.825, pantile = 1.77 tan 22.5 = 0.733, low profile = 1.77 tan 17.5 = 0.558		

Question			Answer	Marks	Part marks and guidance	
14	(a)		$-\dfrac{5}{3}$ **oe**	3	**M1** for eliminating fraction $5(2x + 3) = x$ **M1FT** for collecting *their* x terms on one side, *their* constants on other dependent on equation with x terms on both sides $10x - x = -15$ **M1FT** for $x = \dfrac{b}{a}$ after $ax = b$ seen **max 2 marks if answer incorrect**	**ISW** incorrect simplification of fraction after $x = -\dfrac{15}{9}$ **oe** seen First two method marks may be awarded in reverse order, with elimination mark awarded for reaching single fraction eg **M1** for $2x - \dfrac{x}{5} = -3$ **M1FT** for $\dfrac{9x}{5} = -3$ $a \neq 1$ or -1, $b \neq 0$, but may be products in $ax = b$ If decimal, correct to 3sf or better Condone -1.67 or better for final answer
	(b)		$\dfrac{7}{10y}$ **oe** final answer	2	**M1** for $\dfrac{3 \times 5}{5 \times 2y}$ and $\dfrac{4 \times 2}{2 \times 5y}$ **oe soi** OR **SC1** for final answer $\dfrac{7}{10}$ **oe**	Accept integer/integer values only for 2 marks eg $\dfrac{7y}{10y^2}$ but not eg $\dfrac{3.5}{5y}$ which would get **M1**
15	(a)		505 or 504.$\dot{9}$	1		
	(b)		38 **nfww**	3	**B1** for figs 195 used **M1** for mass of large bag ÷ mass of small bag **M1** for answer to *their* division seen rounded down **max 2 marks if answer incorrect or 38 from incorrect values**	Division seen using consistent units of value in range 19kg to 21kg by value in range 400g to 600g If answer >1

Question			Answer	Marks	Part marks and guidance	
16	(a)		$(3x-1)(5x+2)$	2	**M1** for $(3x \pm 1)(5x \pm 2)$ seen or pair of factors giving two correct terms when expanded, seen or implied in table	Condone omission of final bracket only Accept $(1-3x)(-5x-2)$ for 2 marks Accept eg $(15x-1)(x+2)$ for **M1**
	(b)		1.25 and –2.92	3	**M2** for $\dfrac{-5 \pm \sqrt{5^2 - 4 \times 3 \times -11}}{2 \times 3}$ or $\dfrac{-5 \pm \sqrt{157}}{6}$ seen or for 1.25 or –2.92 as final answer or for final answer 1.3 and –2.9 or for both solutions seen rounded or truncated to 2dp or more **OR** **M1** for use of formula with two errors or $\dfrac{-5 \pm \sqrt{k}}{6}$ or one solution seen to 2dp or more	Condone formula used with one error for **M2**, examples of one error: • *a* substituted wrongly twice • short division line • one error in quoted formula but just $\dfrac{-5 \pm \sqrt{k}}{6}$ where k ≠ 157 implies more than one error For completing the square method award **M2** for $\left(x + \dfrac{5}{6}\right)^2 = \dfrac{11}{3} + \left(\dfrac{5}{6}\right)^2$ **oe**, condoning one error Exact solutions: 1.254994…, –2.92166…
17			659.6 to 660 or 660.5[…]	3	**M2** for $\dfrac{170}{3.5^3} \times 5.5^3$ **oe** **OR** **M1** for $\dfrac{170}{3.5^3}$ or $170 = k \times 3.5^3$ or $m = kd^3$ **soi** **OR** **SC2** for answer 665.5 or 666	Method marks may be awarded for complete method in stages with inappropriate intermediate rounding, eg use of $k = 4$ Allow any letters in place of *m*, *k*, *d*

Question			Answer	Marks	Part marks and guidance	
18	**(a)**		Correct translation of given parabola	**1**		Clear intention but clearly not touching/crossing given parabola 3 need not be indicated
	(b)		Sketch of $y = \cos x$ through (0, 1), (90, 0), (180, -1), (270, 0), (360, 1)	**1**		Clear intention of curve through these 5 points
19	**(a)**		$\tan 62 = \dfrac{OE}{3}$ or better	**M1**	Or $\dfrac{OE}{\sin 62} = \dfrac{3}{\sin 28}$ or better	Accept any letter/term in place of OE Method starting with a correct trig statement using 5.64 scores **M1** only
			$3 \tan 62 = 5.642[...]$	**A1**	$\dfrac{3\sin 62}{\sin 28} = 5.642...$	Allow complete alternate long methods for 2 marks
	(b)		67.68 to 67.71	**2**	**M1** for $\dfrac{1}{3} \times 6^2 \times 5.64$	

APPENDIX

Exemplar responses for Q.3(c)

	Response	Mark
1	Angle in a hexagon = 120, 360 ÷ 120 = 3	**2**
2	As the interior angle is 120° it can have three times next to each other to create 360°	**2**
3	She can do it because they tessellate and fit together	**B1**
4	Because the outer angle on a hexagon is 120° so 3 can make up 360 ['outer' implies exterior but if diagram included showing 120 as interior angle give bod 2]	**B1**
5	Because a hexagon has an exterior angle of 72 so they can fit together. Because it is regular so all the shapes are the same.	**0**
6	Because the exterior angles all add up to 360° [360 must be linked with angles at a point for B1]	**0**
7	Interior angle of a hexagon = 360 ÷ 6 = 60. So 3×60 = 180, so 3 points of hexagon will all fit on a straight line and meet at point	**0**
8	Because hexagons are regular so they can fit each other as they're the same shape	**0**
9	Angles in a regular hexagon add up to make 360°	**0**
10	Three don't fit together because their angles don't add to 360 with just 3 of them	**0**

Exemplar responses for Q.12(b)(ii) comparison

	Response	Mark
	Assume values used in these comments follow from the candidate's working. These are given as examples to clarify when the final M1 mark may be awarded. This M1 can only be awarded if percentage/no of people (ft their working) is used in the reason.	
1	Sonia's results are close to national survey as 75% of Sonia's is 19.125 and only 18 people got to work with 30 minutes or less	**M1**
2	Sonia's survey says that less than 75% take 30 minutes or less [*scores M1 if their % less than 75% has been clearly identified*]	**M1**
3	Sonia's survey shows that 10% less take less than 30 mins to get to work in comparison with the national survey [*following their calculation giving 65%*]	**M1**
4	Around 70% of workers took 30 minutes or less to travel to work, 5% less than national survey	**M1**
5	Hers are different to the national survey as only 58% of people she surveyed take 30 mins or less which is different	**M1**
6	Sonia's results are wrong because only 59% of people took 30 minutes or less [***wrong** is incorrect*]	**M0**
7	There are 179/349 which is 51.3% meaning Sonia's survey is different to the national survey [*not quite enough to imply less*]	**M0**
8	Sonia's is 60% under 30 mins but isn't far off national survey	**M0**
9	Sonia's survey wasn't the same results as the national survey as 60% took 30 mins or less to travel home from work [*'only 60%' would just imply this M1*]	**M0**
10	Only 60% of workers are home within 30 minutes [*doesn't mention what it's comparing with*]	**M0**

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