
**FUNCTIONAL SKILLS LEVEL 1
MATHEMATICS
(8361)**

Paper 2 Calculator Paper

Mark scheme

Version 1.0

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 learners' 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 learners' 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 learners' 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.

Further copies of this mark scheme are available from aqa.org.uk

Glossary for Mark Schemes

Examinations are marked to award positive achievement.

To facilitate marking, the following categories are used:

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 following a mistake in an earlier step.

SC Special case. Marks awarded within the scheme for a common misinterpretation which has some mathematical worth.

oe Or equivalent. Accept answers that are equivalent.
eg, accept 0.5 as well as $\frac{1}{2}$

dep If a mark is given as 'M1dep' it means that if the values used for the mark are incorrect a learner must have been awarded the previous mark(s) to gain this mark. However, the use of correct values for this mark implies the previous mark(s).
eg

17 ÷ 2 or 8.5	M1	
their 8.5 × 9 or 76.5	M1dep	

eg1: a learner shows $17 \div 2 = 9.5$, then 9.5×9 M1 for $17 \div 2$ calculated, then M1dep for correct use of the result of that calculation; a correct method has been shown for the first mark, even though the result is incorrect

eg2: a learner shows 9.5×9 M0, as the first mark cannot be awarded because no method has been shown

eg 3: a learner shows 76.5 M2, as the correct value gains the second mark and implies the first mark.

Question	Answer	Mark	Comments
1	4	B1	
2	35	B1	
3	26 cm	B1	
4	1444	B1	
5	acute (angle) right (angle) obtuse (angle) reflex (angle)	B1	
6	$7.6 \times 2.25 \times 5.4$	M1	
	92.34	A1	
	Additional Guidance		
7	2, 4, 3, 6	B2	B1 at least one frequency correct
	Additional Guidance		
	Ignore tallies		

Question	Answer	Mark	Comments
8	Alternative method 1		
	$8 \times 18 + 12 \times 2$ or $144 + 24$	M1	
	168	A1	
	cm ² or centimetres ² or square cm or square centimetres	B1	condone centimetres squared
	Alternative method 2		
	$20 \times 8 + 4 \times 2$ or $160 + 8$	M1	
	168	A1	
	cm ² or centimetres ² or square cm or square centimetres	B1	condone centimetres squared
	Alternative method 3		
	$8 \times 18 + 8 \times 2 + 4 \times 2$ or $144 + 16 + 8$	M1	
	168	A1	
	cm ² or centimetres ² or square cm or square centimetres	B1	condone centimetres squared
	Alternative method 4		
	$20 \times 12 - 18 \times 4$ or $240 - 72$	M1	
	168	A1	
	cm ² or centimetres ² or square cm or square centimetres	B1	condone centimetres squared
	Additional Guidance		

Question	Answer	Mark	Comments
9(a)	Alternative method 1 – Bar Chart or equivalent		
	Days labelled Wednesday, Thursday, Friday, Saturday	B1	oe condone omission of scale labels and title
	Correct scale with all bars at correct height at 800, 1000, 1400, 700	B2	B1 at least one bar at correct height (ft their scale) or no vertical scale shown but all bars drawn consistently to scale
	correct chart with equal spaces between bars	B1	Condone no space before first bar
	Alternative method 2 - Pictogram		
	Days labelled Wednesday, Thursday, Friday, Saturday	B1	oe condone omission of title
	Key with icon and scale	B1	
	Correct pictogram with all rows correct and equal spaces between rows and icons	B2	Mark broad intention to align icons B1 at least one row drawn correctly (ft their scale).
	Alternative method 3 – Line chart		
	Days labelled Wednesday, Thursday, Friday, Saturday	B1	oe condone omission of scale labels and title
	Correct scale with all values plotted correctly at 800, 1000, 1400, 700	B2	B1 at least one value plotted correctly (ft their scale) or no vertical scale shown but all points plotted consistently to scale
	Correct line chart with all values joined by straight lines with equal spaces between values	B1	Ignore additional lines joining the first and last points to the axis if they are outside of the plotted values Condone solid lines between points
	Additional guidance		
	Freehand drawing – mark intention up to a maximum of 3 marks		

Question	Answer	Mark	Comments
9(b)	2100 + 3900 + 3500 + 2800 or 12300	M1	
	800 + 1000 + 1400 + 700 or 3900	M1	
	their 12300 ÷ 3 or 4100 or their 3900 × 3 or 11700 or their 12300 ÷ 3900 or 3.1... or 3.2	M1dep	dep on first mark dep on second mark dep on both marks
	12300 and 11700 or 4100 and 3900 or 12300 and 3900 and 3.1... or 3.2	A1	
	Correct decision for their values with all method marks awarded	B1ft	

Question	Answer	Mark	Comments
9(c)	Alternate method 1		
	[72, 74]° or [40, 42] or [112, 116]	M1	
	$360 \times \frac{1}{3}$ or 120 or their [112, 116] \div 360 or [0.31, 0.323] or $360 \div$ their [112, 116] or [3.1, 3.2143] or their [112, 116] \times 3 or [336, 348]	M1	
	[112, 116] and 120 and No or [0.31, 0.323] and 0.33... and No or [3.1, 3.2143] and No or [336, 348] and No	A1	
	Alternative method 2		
	$360 \times \frac{1}{3}$ or 120	M1	
	Sector drawn on pie chart with angle 120°	M1dep	
	Sector drawn on pie chart with angle 120° and No	A1	
	Additional Guidance		
	Accept equivalent answers based on $\frac{2}{3}$ coming from Mains		

Question	Answer	Mark	Comments	
9(d)	210 × 9.35 or 1963.5(0)	M1		
	570 × 7.9(0) or 4503	M1		
	their 1963.5(0) + their 4503 + 3700 or 10 166.5(0)	M1dep	dep on M2	
	14 800 – their 10 166.5(0) or 4633.5	M1dep	dep on M3	
	4633.50	A1	Condone 4633.50p	
	Additional Guidance			

Question	Answer	Mark	Comments
10(a)	$(199 + 219 + 198 + 195 + 214) \div 5$ or $1025 \div 5$ or $(197 + 207 + 204 + 196 + 203) \div 5$ or $1007 \div 5$	M1	
	205 or 201.4	A1	
	205 and 201.4 and 'Higher mean'	A1	oe
	Additional Guidance		
	For M1A1A1, accept totals of 1025 and 1007 with an explanation that this implies a higher mean for Town A		

Question	Answer	Mark	Comments
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10(b)	11(th) and 18(th) and £308	B4	<p>B3 11(th) and 18(th) and £154</p> <p>B2 correct dates and total for any flights 7 days apart</p> <p>4(th) and 11(th) and £316</p> <p>18(th) and 25(th) and £402</p> <p>or</p> <p>11(th) and 18(th) chosen with no total</p> <p>or</p> <p>£308 chosen with no dates</p> <p>B1 correct dates and total for one person for any flights 7 days apart</p> <p>4(th) and 11(th) and £158</p> <p>18(th) and 25(th) and £201</p> <p>or</p> <p>correct dates and total for two people for any flights where the return flight is on a later date than the outbound flight</p>
	Additional Guidance		

Question	Answer	Mark	Comments
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10(c)	23.99 – 17.99 or 6	M1	
	their 6 ÷ (19 – 15) or their 6 ÷ 4 or 1.5(0)	M1dep	oe
	17.99 + their 1.5(0) × (22 – 15) or 17.99 + their 1.5(0) × 7 or 17.99 + 10.5(0) or 23.99 + 3 × their 1.5(0) Or 23.99 + 4.5(0)	M1dep	oe
	28.49	A1	

Question	Answer	Mark	Comments
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11(a)	Alternative method 1		
	7.15 – $1\frac{1}{2}$ hours or 5.45 (pm)	M1	
	their 5.45 (pm) – 10 minutes	M1dep	
	5.35 (pm)	A1	oe eg 17.35 twenty five to six SC2 5.35 am
	Alternative method 2		
	7.15 – 10 minutes or 7.05 (pm)	M1	
	their 7.05 – $1\frac{1}{2}$ hours	M1dep	
	5.35 (pm)	A1	oe eg 17.35 twenty five to six SC2 5.35 am
	Alternative method 3		
	$1\frac{1}{2}$ hours + 10 minutes or 1 hour 40 minutes	M1	
	7.15 – their 1 hour 40 minutes	M1dep	
	5.35 (pm)	A1	oe eg 17.35 twenty five to six SC2 5.35 am
	Additional Guidance		
	In all cases accept times given in alternate forms, including words		

Question	Answer	Mark	Comments
11(b)	Alternative method 1		
	$11.6 \times \frac{1}{4}$ or 2.9	M1	
	their 2.9×46 or 133.4	M1	
	70.3×2 or 140.6	M1	
	133.4 and 140.6 and No	A1	
	Alternative method 2		
	$11.6 \times \frac{1}{4}$ or 2.9	M1	
	70.3×2 or 140.6	M1	
	their $140.6 \div$ their 2.9 or 48.48... or 48.5	M1 dep	dep on M2
	48.48... or 48.5 and No	A1	
	Alternative method 3		
	$11.6 \times$ their $\frac{1}{4}$ or 2.9	M1	
	70.3×2 or 140.6	M1	
	their $140.6 \div 46$ or 3.0... or 3.1	M1dep	dep on M2
	2.9 and 3.0... or 3.1 and No	A1	
	Additional Guidance		
	In all cases accept times given in alternate forms, including words		

Question	Answer	Mark	Comments
11(c)	Alternative method 1		
	3.95 + 0.9 + 2.35 or 7.2(0)	M1	
	their 7.2(0) ÷ 100 × 15 or 1.08	M1	oe (3.95 + 0.9 + 2.35) × 0.85 oe scores M2
	their 7.2(0) – their 1.08 or 6.12	M1dep	
	(£)6.12 and Yes	A1	
	Alternative method 2		
	3.95 ÷ 100 × 15 or 0.5925 and 0.9 ÷ 100 × 15 or 0.135 and 2.35 ÷ 100 × 15 or 0.3525	M1	oe their 3.5 × 0.9 + their 2.5 × 0.9 scores M2
	3.95 – their 0.5925 or 3.3575 and 0.9 – their 0.135 or 0.765 and 2.35 – their 0.3525 or 1.9975	M1dep	
	their 3.3575 + their 0.765 + their 1.9975 or 6.12	M1dep	
	(£)6.12 and Yes	A1	
	Additional Guidance		
	In alt 2, condone rounding to the nearest penny in the first and second marks, which also leads to a total of 6.12		

Question	Answer	Mark	Comments
12(a)	Alternative method 1		
	24 000 ÷ 12 – 987.5(0) or 2000 – 987.5(0) or 1012.5(0) or 1720 – 987.5(0) or 732.5(0)	M1	condone 24 000 – 987.5(0) or 23 012.5(0)
	their 1012.5(0) ÷ 5 or 202.5(0) or their 732.5(0) ÷ 5 or 146.5(0)	M1dep	
	their 202.5(0) – their 146.5(0)	M1dep	oe method for 202.5(0) and 146.5(0) must be correct
	56	A1	SC2 4456
	Alternative method 2		
	24 000 ÷ 12 – 987.5(0) or 2000 – 987.5(0) or 1012.5(0) or 1720 – 987.5(0) or 732.5(0)	M1	condone 24 000 – 987.5(0) or 23 012.5(0)
	their 1012.5(0) – their 732.5(0) or 280	M1dep	
	their 280 ÷ 5	M1dep	method for 280 must be correct
	56	A1	SC2 4456
	Additional Guidance		
	[24 000 – 987.5(0)] ÷ 5 or 4602.5(0) scores 2 marks only on alt 1		M1M1M0A0
	[24 000 – 987.5(0)] – [1720 – 987.5(0)] or 22 280 scores 2 marks only on alt 2		
	SC2 is for an otherwise correct calculation using 24 000 as Cho's monthly salary		

Question	Answer	Mark	Comments
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12(b)	Alternative method 1		
	1623.48 – (500 + 400 + 340) or 1623.48 – 1240 or 363.48	M1	
	their 363.48 ÷ 3 × 2 or 242.32	M1dep	
	their 242.32 × 12	M1dep	
	2907.84	A1	
	2908	A1ft	their 2907.84 correctly rounded to the nearest pound with at least M1 awarded
	Alternative method 2		
	1623.48 × 12 or 19481.76 and (500 + 420 + 340) × 12 or 500 × 12 + 420 × 12 + 340 × 12 or 6000 + 5040 + 4080 or 15 120	M1	
	their 19481.76 – their 15 120 or 4361.76	M1dep	
	their 4361.76 ÷ 3 × 2	M1dep	
	2907.84	A1	
	2200	A1ft	their 2907.84 correctly rounded to the nearest pound with at least M1 awarded
	Additional Guidance		