General Marking Guidance Mathematics

- If a learner has crossed out a response to a question, the work should still be marked unless the learner has replaced it with an alternative answer.
- Markers should apply the mark scheme consistently across all papers marked.
- Markers should mark according to the mark scheme and should apply it positively awarding full marks where the answer meets the mark scheme.
- Where the answers do not meet the mark scheme, markers should be prepared to award zero marks.
- The mark scheme gives guidance as to how to allocate marks where an answer is graded according to candidate performance. Where the response does not meet the requirements of the minimum mark, zero marks should be awarded.
- Where the mark scheme allows a mark for 'accept…/allow…', the marker should judge the response's merits based on the information provided in the assessment materials.
- Where the marker is unsure of how to apply the mark scheme, guidance from the Principal Examiner must be sought.
- Where the mark scheme has responses in brackets e.g. (£)5.00, the learner will gain the mark whether or not the information within the brackets is present or not as long as the answer is correct.
- Accept variations of spelling.
- When units are required abbreviations must be correct.

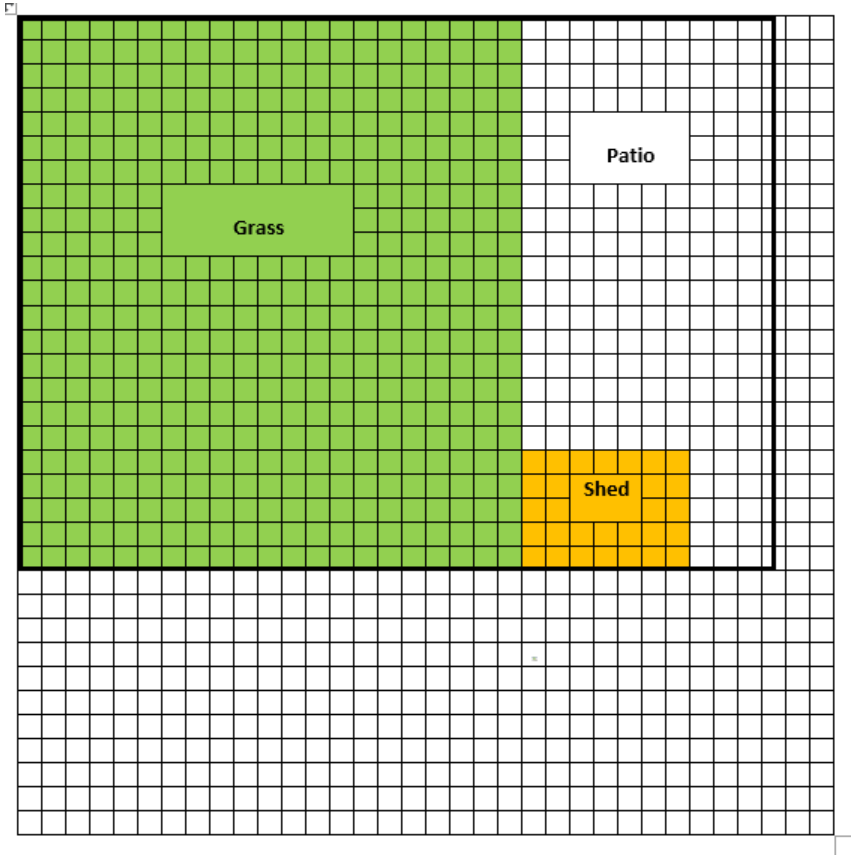
The mark scheme is a guide of possible answers that can be accepted, however, if the candidate has an alternative working out system to arrive at the correct answer this will also be accepted and marked accordingly.

Non-Calculator

	Mark Available	Acceptable Response	Mark	Comment	UPS/PS	Subject Content
Q1	1	1893	1 mark		UPS	N2
Q2	1	Learner ticks option B	1 mark		UPS	MSS19
Q3	2	Converts 36400 to 36.4 and 4300 to 4.3 Mode 36.4	1 mark 1 mark		UPS	HD23
Q4	4	Scale shown for drawing Shed placed on the patio Correct measurement for shed according to scale used Grass in correct proportions for scale used	1 mark 1 mark 1 mark 1 mark	*example drawing on next page Allow any correct positioning of the elements within the area Allow full marks for use of an appropriate scale eg 1 square = 1 metre	PS	MSS18
Q5	2	$\frac{5}{6} + \frac{13}{4}$ = converts to common denominator e.g. $\frac{10}{12} + \frac{39}{12}$ = Correct answer is $\frac{49}{12}$ or $4\ \frac{1}{12}$	1 mark 1 mark	Allow calculation with any accurate denominator	UPS	N7

Q6	2	1,000,000 – 378,500 = (£)621,500	1 mark 1 mark	Allow 2 marks if the answer is seen	PS	N2
Q7	2	15 x 7 = 105 105 ÷ 2 = 52.5cm^2	1 mark 1 mark	Must show units	UPS	MSS16
Q8	2	16 + 4 + 5 = 25 5/25 Percentage = 5 ÷ 25 = 20%	 1 mark 1 mark		UPS	HD27

Q4 example:

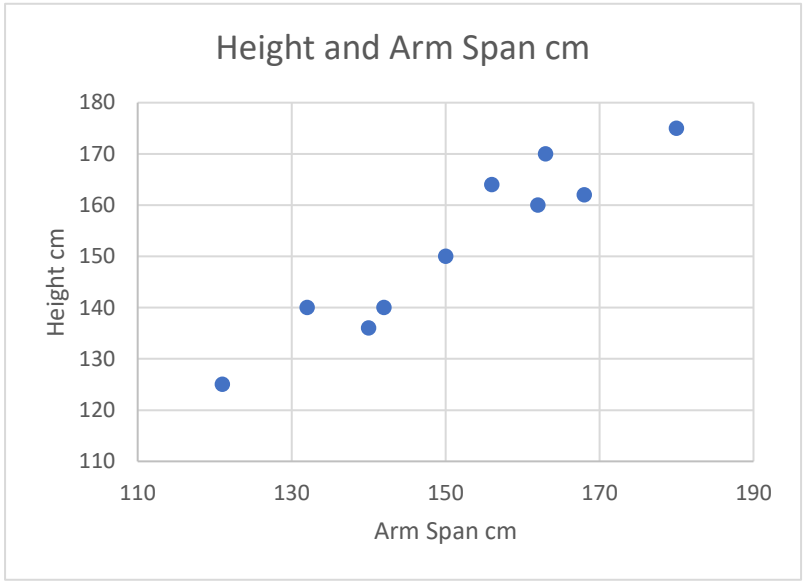


1 square side = 50cm or 0.5m

Calculator						
	Mark Available	**Acceptable Response**	**Mark**	**Comment**	**UPS/PS**	**Subject Content**
Q9	4	Calculates radius 7.6 ÷ 2 = 3.8 Starts to work with formula for calculating volume of a cylinder: 3.14(3.8 x 3.8)19.35= Completes formula: 3.14 x 14.44 x 19.35 = Correct answer = 877.36 (ft^3) Lorry 2 because the capacity is bigger	1 mark 1 mark 1 mark 1 mark	Allow follow through Accept any reasonable justification.	PS	MSS17
Q10	3	3 ÷ 21 x 100 = (14.285) 14 14%	1 mark 1 mark 1 mark		PS	N6

	Mark Available	Acceptable Response	Mark	Comment	UPS/PS	Subject Content
Q11	4	Draws a scatter graph Title, x and y labels 10 plots on graph Positive correlation must be seen in explanation	1 mark 1 mark 1 mark 1 mark	*example on next page	PS	HD28
Q12	3	41.829 ÷ 47.75 = (0.876km) 0.876 x 60 = 52.56(km) or 53.731÷ 60 = 0.8955166 (53.731 – 52.56 = 1.171) or (0.8955166 – 0.876 = 0.0195166) e.g No he would not have covered enough distance or No his speed was slower so would not have covered the required distance	1 mark 1 mark 1 mark		PS	N10 MSS15
Q13	4	321.45 ÷ 3 = 107.15 107.15 x 5 = 535.75 535.75 ÷ 100 x 23.2 = 124.294 535.75 + 124.294 = £660.04	1 mark 1 mark 1 mark 1 mark		PS	N11

Example Q11


Height and Arm Span cm
180
170
160
150
140
130
120
110
Height cm
110
130
150
170
190
Arm Span cm

	Mark Available	Acceptable Response	Mark	Comment	UPS/PS	Subject Content
Q14	4	Range for Team B 59 – 29 = 30 Mean for Team B 29+51+32+43+32+57+59+41+33+40 ÷ 10 = (41.7) E.g. Is incorrect Team B have lower range so were more consistent Eg Correct Team A have the higher mean so scored more goals on average.	1 mark 1 mark 1 mark 1 mark	Do not allow if Lower range High mean seen without working	PS	HD25
Q15	5	Calculates the mid points 1, 4, 7, 10, 13 Midpoint x frequency 1x40 = 40 4 x 32 = 128 7 x 30 = 210 10 x 25 = 250 13 x 20 = 260 Total = 888 Frequency total = 147 888 ÷ 147 = 6.04	1 mark 1 mark 1 mark 1 mark 1 mark	Allow FT from previous calculations	UPS	HD24

	Mark Available	Acceptable Response	Mark	Comment	UPS/PS	Subject Content
Q16	6	Reads mileage chart 214 miles Plymouth London 214 ÷ 32.1 = 6.666…gallons needed Converts gallons to litres 6.666…x 3.785 = 25.230 25.230 x 128.5 = 3242.055p = £32.42 214 ÷ 40 = 5.35 5 hours 21 mins	1 mark 1 mark 1 mark 1 mark 1 mark 1 mark		PS	MSS15 MSS14
Q17	5	Starts to work with interest 14000 x 1.03 = (14420) or 14000 x 1.053 = (14742) Completes interest for Saver 1 for 2 years 14420 x 1.03 = 14852.6 Or 14000 x 1.03^2 = 14852.6 Or 1.03 x 1.03 x 14000 = 14852.6 Or 1.03 x 1.03 = 1.0609 (6.09%) Saver 2 (14000 x 1.053) = 14742 14742 x 1.009 = 14874.68 Or 1.053 x 1.009 x 14000 = 14874.68 Or 1.053 x 1.009 = (1.062477 (6.2477% or rounded to 6.25%) E.g. Alex is incorrect Saver 2 will pay more interest or Saver 2 pays £22.08 more or Saver	1 mark 1 mark 1 mark 1 mark	Allow FT for method	PS	MSS13

		2 total interest over 2 years is 6.2477/6.25% whereas Saver 1 total interest is 6.09% 1 mark				
Q18	2	4260/12780 Simplest form 1/3	1 mark 1 mark		PS	N8
Q19	3	Substitutes formula (27 x 8) + (0.2 x 378) = (216 + 75.60) = (£)291.60 E.g. Yes £8.40 less or Yes £300 is more than £291.60	1 mark 1 mark 1 mark	Do not allow marks for just Yes seen	PS	N3
Q20	1	45 ÷ 5 x 3 = 27 92 x 27 = 2484 2484 + 32 = 2516	 1 mark		UPS	N12
Q21	4	Selects correct median 4851 Method to convert 4.851 ÷ 0.454 = (10.685…) Or 10.8 x 0.454 = (4.9032) 0.115 ÷ 10.8 x 100 = Or 0.115 ÷ 10.685 x 100 = Or 0.522 ÷ 4.9032 x 100 = Or 0.522 ÷ 4.851 x 100 = Correct answer 1.064…% Or 1.076…%	1 mark 1 mark 1 mark 1 mark		PS	HD23 MSS14 N6
	Total Marks 64	**Pass mark 38/64**			**UPS 16 PS 48**	**N 21 MSS 25 HD 18**

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