Question			Answer	Marks	Part marks and guidance	
1	(a)		Trapezium	1		
	(b)		6	1		
2	(a)	(i)	Any multiple of 13	1		Allow 13
		(ii)	41, 43 or 47	1		
	(b)		112	2	**B1** for any common multiple of 16 and 28 or one complete, correct list of multiples leading to 112 or $2^4 \times 7$	16,32,48,64,80,96,112 or 28, 56, 84,112
3	(a)	(i)	7900	1		
		(ii)	8000	1		
	(b)		7	1		Do not allow 3^7
4	(a)	(i)	=	1		
		(ii)	<	1		
		(iii)	<	1		
	(b)		$x > 2$	1		Allow $2 < x$
5			$\frac{7}{26}$ 28% 2.7	2	**M1** for either 0.28 or $\frac{7}{25}$ from 28% or 0.26[9…] or 0.27	
6	(a)	(i)	$4p$	1		
		(ii)	$5j - 2k$	2	**B1** for $5j$ or $-2k$ in final answer	
	(b)		144	2	**M1** for 120 or 24 or $10 \times 12 + 6 \times 4$	Not 120h or 24t
	(c)		$d = \frac{f - e}{7}$ oe nfww	2	**M1** for correct first step or $\frac{f - e}{7}$	$e + 7d = f$ or $e - f = -7d$ oe
7			0.38 oe	2	**M1** for $1 - (0.4 + 0.05 + 0.17)$	If answer line blank check table $\frac{0.38}{1}$ scores **M1**
8	(a)		52	1		

Question			Answer	Marks	Part marks and guidance	
	(b)		60 8 12 3	**4**	**B1** for each correct value OR **B1** for 60 **B1 FT** for 12 **B1 FT** for 8 and 3	Answers must be integers Mark to candidate's advantage
	(c)		Practical test because 61 > 60 (Comparison explicitly seen)	**3**	**B1** for 61 or 52+9 or 84.7[2…]% or 85% [for practical] **B1FT** for *their* 60 or *their* 83[.3..]% [for theory] **B1FT** for correct conclusion based on *their* figures in the table, must see comparison	Accept denominator of 72 **FT** from their diagram, must give numerical values
9			Correct enlargement (6, 3) (12, 3) (12, 9) (9, 12) (6, 9)	**3**	**B2** for correct enlargement incorrect centre or enlargement scale factor 2 from correct centre OR **M1** for 3 points correctly plotted	Condone good freehand
10	**(a)**		12.4	**3**	**M2** for 62 ÷ 500 × 100 oe OR **M1** for 62 ÷ 500	
	(b)		213.64	**3**	**M2** for 1.09 × 196 oe OR **M1** for 0.09 × 196 oe soi by 17.64	If non calculator method, it must be fully correct

Question			Answer	Marks	Part marks and guidance	
11			6	4	**B3** for 3 and 2.25 or for 5.25 OR **M1** 360 ÷ 15 soi by 24 **M1** 1440 ÷ 80 soi by 18 **M1** *their* 24 ÷ 8 and *their* 18 ÷ 8 or *their* (24 + 18) ÷ 8 OR **M1** for 15 × 8 soi by 120 **M1** for 80 × 8 soi by 640 **M1** for 360 ÷ *their* 120 and 1440 ÷ *their* 640	Accept equivalent alternative methods
12			6000	4	**B3** for 1125, 1875 and 3000 OR **M3** for 750 ÷ 2 × *their* (3+5+8) OR **M2** for 750 ÷ 2 × 3 or 750 ÷ 2 × 5 or 750 ÷ 2 × 8 OR **M1** for 750 ÷ 2 soi by 375 If **0** scored **SC2** for 750 +1250 + 2000 = 4000 or 450+ 750 +1200 = 2400 OR **SC1** for 750 ,1250 ,2000 or 450, 750, 1200 OR **SC1** for [Leo] *x* [Kush] *x* + 750 [Mai] 2*x* + 750 and totals to 4*x* + 1500	

Question			Answer	Marks	Part marks and guidance	
13	(a)		20	1		
	(b)		60	2	**M1** for 50 miles in 50 min oe 50/50[x 60]	
	(c)		Line from (1310, 120) to (1420, 180)	2	**B1** for line from (1310, 120) **B1** for line to (1420, 180)	Extra stop allowed A non-decreasing curve is OK
14			12, 36, 14	6	**B1** for one of [Gugu] 3*x* or [Deanna] *x*+2 **M1** for 52.7 ÷ [0.]85 oe soi by figs 62 **M1**for *x* + 3*x* + *x* + 2 **M1ft** for 5*x* = 60 **A1** for *x* =12	
15	(a)		-1 [-4] [-5] [-4] -1 4 [11]	2	**B1** for 1 correct	
	(b)		Correct curve	2	**B1** for 4 or more points correctly plotted FT *their* table	Tolerance half small square
	(c)		Ruled line *y* = −2 drawn	1		Line from *x* = -2 to *x* =2
	(d)		-1.8 to -1.6 and 1.6 to 1.8	2	**B1** for 1 correct	**FT** from *their* graph ± 0.1 for 2 or 1 mark Must have a curve and a straight line for FT

Question			Answer	Marks	Part marks and guidance	
16	(a)		93 ÷ 3 or 31 or 100 ÷ 3 or 33.3.. or 55 ÷ 1.55 or 3300 ÷ 93 or 35.5 or 35.48… or 55 ÷ 93 or 0.6 or 0.59…	1	accept any correct method	
			Their 31 × 100 or 3100 or *their* 33.3... × 93 or *their* 35.5 × 3	1		
			their 3100 ÷ 60 soi by 51.6[6..] or 51.7 or 52 or 51[min] 40[sec] or 55 × 60 soi 3300 or 106[.5] or 106.45…	1		e.g. 106.45 lengths in 55 mins
			106.45 or 106[.5] > 100 or 51.6[6]. or 51.7 or 52 or 51[min] 40[sec] < 55 or 31[00] < 33[00] or So he can swim that distance	1	Conclusion or comparison of correct values required	
	(b)		he swims at the same rate	1	accept any correct statement e.g. he does not slow down, no breaks	See appendices
	(c)		he will get tired/he will slow down/not take breaks	1	accept any correct statement	See appendices
17	(a)		4 points correctly plotted	2	**B1** for 2 or 3 points correctly plotted	tolerance ±1 mm
	(b)		Strong / good positive	1 1		
	(c)		71.[42…] or 71.4[3] nfww	4	**B1** for 21 **B1** for 15 **M1** for (*their* 15)÷21 ×100 oe If **0** scored **SC1** for '$y = x$' drawn or, if points not plotted in (a), **SC1** for $\frac{12}{17}$	21 from 17+4 **FT** their diagram

Question			Answer	Marks	Part marks and guidance	
18			21	4	**B1** for 6 and 9 **M1** for *their* 6 × 5 **M1** for *their* 6 × 5 – *their* 9	Implied by 6:30
19			38.7	6	**B3** for 50 for *DE* or *CF* nfww Or **M1** for $62.5^2 - 37.5^2$ **M1** for $\sqrt{62.5^2 \pm 37.5^2}$ And B3 FT for $\sin^{-1}\frac{their50}{80}$ correctly evaluated or **M2 FT for** ft for $\sin^{-1}\frac{their50}{80}$ or **M1 FT** for $\sin[x] = \frac{their50}{80}$	Allow 39 May be in correct place on diagram 2500 implies **M1**
20	(a)		Accurate perpendicular bisector from at least AB passing within 3cm of C with two pairs of correct arcs Arc centre C, at least from BC to CD with radius 3 cm Two correct points marked intersecting the line and the arc	2 2 1	**B1** for accurate perpendicular bisector **B1** for any arc centre C **Dep** on **B1** (bisector) and **B2** (arc) scored above	Tolerance ±2mm

Question			Answer	Marks	Part marks and guidance	
	(b)		One of the points is not in his garden or only one is in his garden	**1**	accept any correct reason e.g. one point is behind the *CD* fence	
21	**(a)**		[Line] does not go through (0, 0)	**1**		Accept origin, O
	(b)		85	**2**	**M1** for $\frac{68}{20}$ soi by 3.4	