PiXL Pre Public Examination, May 2017, 2F, Edexcel Style Mark Scheme

Qn	Working	Answer	Mark	Notes	
1		1.7424	1	B1	cao
2		56.6	1	B1	cao
3		$\dfrac{5}{16}$	2	M1	for $\dfrac{30}{96}$ oe
				A1	cao
4		26	2	M1	for $39 \div 3 \times 2$
				A1	cao
5		$90	2	M1	for complete method using graph eg £20 = $30
				A1	cao
6	$360 - (108+138+60) = 54°$	54°	4	A1	for Orange 54°
	$108 \div 18 = 6$	23		M1	for $108 \div 18$
	$138 \div 6 = 23$			A1	for 23
	$60 \div 6 = 10$	10		A1	for 10
7	$650 \div 30 = 21.66…$	Small tray of 30 plants is better value for money + differences	4	P1	for starting process to find cost of any 1 plant eg. 650 ÷ 30.
	$895 \div 40 = 22.375$			M2	for any 2 of 21.66, 22.375 or 21.98 seen
	$1099 \div 50 = 21.98$			C1	for correct conclusion from a comparison of correct appropriate figures.

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8	(a)		70 mins	1	B1	Cao
	(b)	$\frac{20}{30} \times 60 = 40$ min 1840 + 40min = 1920 Or $20 \div \frac{50}{60} = 24$mph	yes with correct comparative figures	3	M1 M1 C1	for method to calculate journey time travelling at 30 mph, eg. $\frac{20}{30}$ (=0.66…) or 40 (mins) (dep) for method to work out arrival time at home, (consistent units) eg. 1840 + "40 mins" (=1920) for yes with comparison of 40 minutes with 50 minutes or stating arrival time home as 19:20
9	(a)	$5 \times 7 = 35$	35	1	B1	Cao
	(b)	$9 - (8 \times 4) = -23$	-23	2	M1 A1	for $9 - (8 \times 4)$ cao
10	(a)		38, 43	2	B2	for 38 & 43
	(b)		Added 5; +5	1	B1	for +5 or $5n + 8$
	(c)		73	1	B1	cao
	(d)	$5n + 8 = 80$ $5n = 72$ $n = 72 \div 5$ $n = 14.4$	All numbers end in 8 or 3	1	B1	78, 83 are in the sequence or solution to $5n + 8 = 80$ n=14.4 is not an integer, so 80 is not a term.
11		$48.72 \div 21 = 2.32$ $2.32 \times 53 = 122.96$	£122.96	3	M1 M1 A1	for $48.72 \div 21$ or 48.72×53 seen (dep) 2.32×53 or $2582.16 \div 21$ cao
12		<table><tr><td></td><td>Fb</td><td>T</td><td>R</td><td></td></tr><tr><td>B</td><td>**14**</td><td>8</td><td>**2**</td><td>24</td></tr><tr><td>G</td><td>8</td><td>**9**</td><td>12</td><td>**29**</td></tr><tr><td></td><td>22</td><td>**17**</td><td>**14**</td><td>53</td></tr></table>	14	4	M1 M1 M1 A1	for calculation of total girls 53 – 24 = 29 for total boys that chose football 22 – 8 = 14 for total girls that chose running 24 – (14 + 8) = 2 for 12 + 2 = 14

Qn		Working	Answer	Mark		Notes
13	(a)	$270 - 120 = 150$ $150 \div 15 = 10$	10hrs	3	P1 M1 A1	for beginning process eg. $270 - 120$ for $150 \div 15$ cao
	(b)	$36 \times 5 = 180$ $120 + (15 \times 5) = 195$	Quickmove is cheaper to hire by £15	4	A1 M1 A1 C1	for $36 \times 5 = 180$ for $120 + (15 \times 5)$ for 195 for correct conclusion from a comparison of correct costs.
14	(a)		$80 < l \le 100$	1	B1	cao
	(b)		Frequency polygon drawn correctly	2	B2 B1	for fully correct frequency polygon - points plotted at the midpoint. for all points plotted accurately but not joined with straight line segments
15	(a)	$50 - 36 = 14$ $14 \div 2 = 7$ $16 + 7 + 7 = 30$cm	30cm	2	M1 A1	for $50 - 36 = 10$ therefore $14 \div 2 = 7$ cao
	(b)	$30 \times 50 = 1500$ $16 \times 36 = 576$ $1500 - 576 = 924$cm^2	924cm^2	3	P1 M1 A1	for starting process to solve problem eg. 30×50 for $1500 - 576 = 924$ cao
16	(a)		unlikely	1	B1	cao
	(b)		impossible	1	B1	cao
	(c)	$\dfrac{5+9}{n} = \dfrac{7}{10}$ $140 = 7n$ $n = 20$ $20 - 9 - 5 = 6$	6	2	M1 A1	for $\dfrac{5+9}{n} = \dfrac{7}{10}$ or any fraction equivalent to $\dfrac{3}{10}$ or $\dfrac{7}{10}$ cao

Qn		Working	Answer	Mark	Notes	
17	(a)		A & D	1	B1	cao
	(b)		B & F	1	B1	cao
	(c)		26cm^2	1	B1	cao
18		12.5 ÷ 5 = 2.5 13 × 2.5 = 32.5 12.5 + 20 + 32.5 = 65	65cm	3	P1 M1 A1	for beginning process to find scale factor eg. 12.5 ÷ 5 for finding length of missing side cao
19		$3x + 4 = 5x + 2$ $4 - 2 = 5x - 3x$ $2 = 2x$ $x = 1$ $3x + 4 = x + 16$ $2x = 12$ $x = 6$ $5x + 2 = x + 16$ $4x = 14$ $x = 3.5$	1, 6 & 3.5	5	P1 A1 M1 A1 A1	for beginning process to solve problem eg. $3x+ 4 = 2x+10$ for $x = 1$ for $2x = 8$ $x = 6$ for $x = 3.5$
20		20 × 8 = 160 or 23 × 9 = 207 207 − 160	47	2	M1 A1	160 or 207 cao
21		$x + 20$ $2(x) + 2(x+20) = 4x + 40$ $4x + 40 < 300$ $4x < 260$ $x < 65$	64m	4	B1 M1 A1 B1	for finding length as an expression for solving equation $x < 65$ cao
22	(a)		Plotted accurately	1	B1	cao
	(b)		Positive	1	B1	cao
	(c)		5.42pm – 5.46pm	3	B1	line of best fit drawn

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				M1	between 30 min – 34 min
				A1	5.42pm – 5.46pm
23		A & 3 B & 4 C & 2 D & 1	2	B2 B1	for all correct for two correct
24	$3.5 \times 2 = 7$ $7 - 1 = 6$ $2 \times 2 = 4$ $4 - 8 = -4$	(6,-4)	2	M1 A1	for complete method cao

TOTAL FOR PAPER IS 80 MARKS