

PiXL Pre Public Examination, May 2018, 2F, Edexcel Style Mark Scheme

Qn	Working	Answer	Mark	Notes
1		13.3225	1	B1 cao
2		66%	1	B1 cao
3		$\frac{25}{44}$	1	B1 cao
4		0.3	1	B1 cao
5	(a)	13, 21, 39, 27, 33	1	B1 cao
	(b)	33	1	B1 cao
	(c)	13 or 39	1	B1 cao
	(d)	27	1	B1 cao
6		Yes, because the median is 4	2	M1 for method to find the median C1 explanation that 4 is the median and is bigger than 3.
7	$52.4 \times 1000 = 52400$ $52400 - 22500 = 29900$ $29900 \div 1000 = 29.9$	29.9km	3	P1 for starting process to convert 52.4km to metres or 22500m to km P1 for 52400m or 22.5km seen A1 cao

Qn	Working	Answer	Mark	Notes
8	(a)	-5 and -1	2	B2 for -5 and -1
	(b)	Add 4	1	B1 cao
	(c)	Full explanation	1	C1 nth term is $4n - 29$; $(4 \times -5) - 29 = -49$
		$4n - 29 = -50$ $4n = -21$ $n = -5.25$		
9		$(24 - 4) \div 2 = 10$	2	B1 for $(24 - 4) \div 2$ or 10 B2 for $(24 - 4) \div 2 = 10$
10		$1095 \div 4 = 273.75$ $273.75 \times 100 = 27375$	2	M1 for $1095 \div 4 = 273.75$ A1 cao
11	(a)	50 + (33 × 9) = 347 mins	2	M1 for 50 + (33 × 9) or 347 seen A1 cao
	(b)	$(554 - 50) \div 9 = 56$	2	M1 for 554 minutes or $(554 - 50) \div 9$ A1 cao
12	(a) (i)	Nutty Crunch	1	B1 cao
	(ii)	186kj	1	B1 cao
	(b)(i)	119g	2	M1 for $35 \div 150$ or $510 \div 150$ A1 cao
	(ii)	9.8g	2	M1 for $3 \div 150$ or $510 \div 150$ or $5 \div 150$ or $600 \div 150$ A1 cao
		$(510 \div 150) \times 3 = 10.2$ $(600 \div 150) \times 5 = 20$ $20 - 10.2 = 9.8$		
13	(a)	4 : 3 : 5	2	M1 for 640 : 480 : 800 or 320 : 240 : 400 A1 cao
	(b)	2.5 oe	1	A1 cao

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14	(a) (b)(i) (ii) (c)	£50 £200 £110 $12\frac{1}{3}$ hrs	1 1 1 2	B1 cao B1 cao B1 cao M1 for £30 is 1 hour's work A1 cao
15	$420 - 50 = 370$ $370 \div 30 = 12.333 \dots$	(180 – 38) ÷ 2 = 71° 180 – 71 = 109° Shown, with reasons	4	M1 for method to find angle <i>ABC</i> or <i>ACB</i> M1 for full method (180 – 38) ÷ 2 = 71°; 180 – 71 = 109° C1 for one appropriate reason C1 for complete set of reasons
16	$375.5 - 350 = 25.5$ $(25.5 \div 350) \times 100 = 7.28 \dots$	7.3%	3	M1 for 375.5 – 350 or 25.5 seen M1 for $(25.5 \div 350) \times 100$ A1 cao
17	(a) (b)	$\frac{4}{12}$ oe 105	1 2	B1 cao M1 for method to find 1 part A1 cao
18	$0.6 \times 13 = \text{£}7.80$ $7.8 \times 1.2 = \text{£}9.36$ $8 \times 1.16 = \text{£}9.28$	Cheaper to eat in the UK by 8p	4	M1 for cost of pizza in the same currency (either \$ or £) M1 for method to find cost of one pizza including service charge A1 for full method to find cost in both countries ie 9.36 and 9.28 seen oe. C1 statement
19	(a) (b)	All 5 points plotted 39% - 44%	2 2	B1 for at least 2 correct points plotted B1 for all points plotted correctly B1 for line of best that can be used to estimate percentage score on paper 2

Qn	Working	Answer	Mark	Notes
(c)		reason	1	B1 for 39 - 44% C1 for reason, e.g. lobf can vary, data is only a sample, scale cannot be read exactly
(d)		0.8 - 1	2	M1 for method to find gradient, eg triangle drawn with "change in distance ÷ change in time"
(e)		interpretation given	1	A1 for 0.8 - 1 C1 as the score in paper 1 increases, the score in paper 2 increases.
20 (a)		Enlargement, SF2, centre (1,3)	2	B1 for enlargement and scale factor 2
(b)		Reflection in $y = x$	2	B1 for centre (1,3) B1 for reflection B1 for mirror line $y = x$
21	$12(3x + 5) = 10(4x - 3)$ $36x + 60 = 40x - 30$ $90 = 4x; x = 22.5$ $2((4 \times 22.5) - 3) + 20 = 194$	194cm	5	P1 for process of forming an expression for one area P1 for process of forming an equation to find value of x P1 for complete process to solve the equation A1 for $4x = 90$ or $x = 22.5$ B1 ft using value of x in perimeter of B
22	$\frac{5^2 - 11^2}{2\pi^2}$ $\frac{-96}{2\pi^2} = -4.86341$	-4.9	3	M1 for substituting correctly M1 for -96 or 19.73... seen A1 cao
23	$(1 \times 10) + (3 \times 8) +$ $(5.5 \times 5) + (8.5 \times 3) +$ $(12 \times 4) = 135$ $135 \div 30 = 4.5$	5	3	M1 for $f \times x$ using midpoints M1 for $\Sigma fx \div 30$ A1 cao
24	$13.6^2 + 9.3^2 = 271.4$ $\sqrt{271.45} = 16.47573974$ $16.47573974 - 9.3 =$ 7.175739741	7.18cm	4	P1 starts process eg. Pythagoras theorem P1 for 271.4 seen P1 for subtracting radius from their answer A1 cao

TOTAL FOR PAPER IS 80 MARKS