

PIXL AQA Style Paper 2F (November 2016) Mark Scheme

Q	Answer	Mark	Comments
1 (a)	46352	B1	
1 (b)	Three thousand, 3000	B1	
1 (c)	Five hundredths	B1	
2	0.375	B1	
3 (a)	7	B1	
3 (b)	Yes Odd number plus even number (constant difference of 2) gives an odd answer	B2	Award 1 mark for 'Yes' and evidence of addition of 2 to odd terms in the sequence Award B2 for 'Yes' and explanation or paraphrase eg odd+even, the difference is constant
4	(5 , 7)	B2	Award one mark for each the x and the y co-ordinate.
5	15 : 9 and 25 : 15	B1	Both must be correct
6	16 minutes	B1	Do not allow 0:16
Additional guidance			
Units given as minutes hence given in correct units			

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7	$3n+5=23$ $(23-5) \div 3$	M1	Award one mark for inverse method seen
	6	A1	

8(a)	0.2	A1	oe
8(b)	Player one chooses A and C. Player two chooses B and D. .	A1	

9 (a)	3, 4, 5, 6	B1	
9 (b)		B2	B1 for solid circle at 3 B1 for open circle at 7 Only award B2 if they are also joined with a straight line. Allow variations (eg above, along or below the line).

10		M1	Evidence of a reasonable method or attempt to work out total cost of flowers.
	3 bunches	A1	
	14 single flowers	A1	

11	1.05	B1	
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12 (a)	$2x$	B1	Do not accept any other variable in place of x
12 (b)	$2x + 3$	B1	Do not accept any other variable in place of x even if follow through from 12(a)
12 (c)	$\frac{2x+3}{2}$ or $x + 1.5$	B1	Do not accept use of incorrect notation such as \div

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13	$360 \div 30$	M1	Attempts to calculate angle for one student.
	English 60° French 72° Geography 36° History 24° Maths 84° Music 72° RE 12°	A2	One or two mistakes award A1 > two mistakes award A0 No follow through from incorrect value of $360 \div 30$ in M1

0

14 (a)	73°	B1	
14 (b)	21°	B1	
14 (c)	Angles in a triangle + $x = 180^\circ$ Angles on a straight line + $x = 180^\circ$	B1	Allow explanation providing that angle sum of a triangle and angle sum of a triangle equal to 180° are seen

15 (a)	$(15 \div 32) \times 100 = 46.875\%$ or $48 \div 100 \times 32 = 15.36$	M1	Alternative method permitted eg 48% is 15.36 not 15. Correct method seen.
		A1	Award A1 and M1 for correct explanation that they are not equivalent. Award M1 only if incorrect rounding occurs eg 15.36 pupils rounded to 15 pupils
15 (b)	10 students	M1	0.36×28
		A1	10
15 (c)	Total students identified as $\frac{(10+15)}{32+28} = 25/60$ 5/12	M1	Award M1 if correct method seen but leading to incorrect answer due to incorrect follow on answer from 15(b) Award M1 for correct method but leading to incorrect simplifying of fraction
		A1	Award A1 M0 if only 5/12 seen without method/earlier working/numbers. Do not allow alternative representation eg percentage
15 (d)	5:7	M1	Correct method seen (subtract number achieving from total) award mark if method observed but follow on numbers from 15(c) and 15(b) incorrect
		A1	Correct answer observed. Award A1 M0 if correct answer observed but no method seen Award M1 if ratio incorrectly simplified but 25:35 seen

Q	Answer	Mark	Comments
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16	Alternative method 1		
	6.40 ÷ 20 = 32p per can	M1	Do not award A1 if no working is shown
	2.04 ÷ 6 = 34p per can	M1	
	Pack of 20 is cheaper	A1	
	Alternative method 2		
	Find cost for 60 6.40 x 3	M1	Do not award A1 if no working is shown Award if alternative common multiple used
	Find cost for 60 2.04 x 10	M1	
Supermarket is cheaper	A1		

17	£14.20 and £11.14 identified	M1	
	£9.20 and £4.27 identified	M1	
	Addition of values and £38.81 seen	M1	
	Answer Yes seen	A1	Do not award mark if no marking seen

18(a)	Alternative method 1		
	Box A dimensions calculated 8cm, 5cm, 4cm	M1	
	$V = 8 \times 4 \times 5$	M1	Attempts to use $V = L \times W \times H$
	160cm ³	A1	Must include correct units cm ³ for A1
	Alternative method 2		
	$V = 4 \times 2 \times 2.5 (= 20)$	M1	Attempts volume of box B
	Their 20×8 or Their 20×2^3	M1	No other multiplier accepted
	160cm ³	A1	Must include correct units cm ³ for A1

18b)	1:8	M1 A1	Award M1 for 20:160 or answer not fully simplified Award A2 if no method seen Do not award for incorrect ratio eg 4:1
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19	SAS	B1	Only one letter circled. Do not award if more than one answer is indicated
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20	20% of £425 calculated as £85.00	M1	Any permitted method for 20% seen
	£29 x 12 = £348 + £85.00 = £433.00	M1	Award M2 if £433 seen
	£8.00	A1	

Q	Answer	Mark	Comments
21 (a)	21	B2	Award B1 if one error made
	5		
	7		
21 (b)	2 : 5	B1	B0 for 5 : 2
21 (c)	30	B1	

22 (a)	The longer a student revises, the higher the mark (s)he would get or the higher the mark the pupil gets, the longer (sh)he is likely to have spent revising.	B1	
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22 (b)	34	M1 A1	Evidence of use of line of best fit (line drawn from 120 minutes) [a,b] [30,40]
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23		M1	$(50-12) \times 107.9 = 4100.2p$
23		M1	$4100.2 \div 100 = 41.002$ pounds 41 pounds $\times 2$
	82 points in total	A1	Award A3 for correct answer but no working

24	Primary, secondary, census, discrete, continuous	B3	Spelling errors permitted, award 3 marks for 5 correct words, deduct one mark for each error ie 2 correct words scores 0
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25 (a)	3.295447344	B1	
25 (b)	3.30	B1	Must have 3 sf – 3.3 scores B0 here.

26	$x^2 + 10x + 24$	M1 M1 A1	Multiplication of length and width seen $x^2 + 6x + 4x + 24$ $x^2 + 10x + 24$
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Q	Answer	Mark	Comments
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27	$\tan^{-1}(1.2/2.4)$	M1	
	Angle 26.56° seen	M1	
	Yes, because the angle is between 25° and 35°	A1	

28	Multiplier 1.0125 seen	M1	
	3000×1.0125^5	M1	Compound interest formula applied; for first M1 allow minor errors (including follow through from incorrect 1.0125) if intention is clear.
		M1	All components, numbers correct now
	£3192.25 (allow £3192.24)	A1	
	Additional guidance		
	Allow M1 M1 M1 A1 for fully correct answer using five incremental changes.		
For simple interest, allow M1 M0 M0 A0 if first year is worked out correctly (including correct £3037.50 obtained) but no other marks. If result for year one is also incorrect must award no marks for any attempt at simple interest.			