

Practice Test 1F (Set 10) – Foundation tier mark scheme

Question		Working	Answer	Mark	Notes
1	(a)		unlikely	1	B1
	(b)		$\frac{1}{2}$ × at $\frac{1}{2}$	1	B1
	(c)		× at 0	1	B1
					Total 3 marks

Question		Working	Answer	Mark	Notes
2	(a)		Bar drawn to 12	1	B1
	(b)		Bogota, Lima	1	B1
	(c)		Manila	1	B1
	(d)		11	1	B1
	(e)	90 : 60 oe			M1 or for an answer of 2 : 3
			3 : 2	2	A1 cao
					Total 6 marks

Question		Working	Answer	Mark	Notes
3	(a)		3 or 19 or 51 or 81	1	B1
	(b)		24 or 60	1	B1
	(c)		16 or 81	1	B1
	(d)		3 or 19	1	B1
					Total 4 marks

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Question		Working	Answer	Mark	Notes
4	(a)		$12ef$	1	B1
	(b)		$3m + 8k$	2	B2 B1 for $3m$ or (+) $8k$
	(c)	$5y = 14 - 3$ or $5y = 11$ or $3 - 14 = -5y$ or $-11 = -5y$		2	M1
			$2\frac{1}{5}$		A1 for $2\frac{1}{5}$ or $\frac{11}{5}$ oe or 2.2
					Total 5 marks

Question		Working	Answer	Mark	Notes
5	(a)		$\frac{16}{20}$	1	B1
	(b)		12 squares shaded	1	B1
	(c)		80	1	B1
	(d)	$48 \div 4 \times 5$ or $48 \times 5 \div 4$ or $48 \div 0.8$ or 48×1.25 oe			M1 for a complete method
			60	2	A1
					Total 5 marks

Question		Working	Answer	Mark	Notes
6	(a)		5	1	B1
	(b)		60	1	B1
	(c)		1000	1	B1
					Total 3 marks

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Question		Working		Answer		Mark	Notes
7	(a)		4	1	B1		
	(b)	10 – 4		2	M1	or for 10 and 4 selected	
			6		A1		
	(c)	4, 4, 4, 4, 4, 5, 7, 7, 7, 8, 10		2	M1	allow one error or omission	
			5		A1		
	(d)		more with reason	1	B1	e.g. mean of extra pairs of shoes is £40; £31 is £3 less than given mean and £49 is £15 more than given mean	
						Total 6 marks	

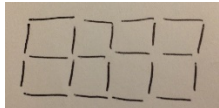
Question		Working		Answer		Mark	Notes
8	(a)			5 700 000	1	B1	
	(b)			$4 \times 10 - 3$	1	B1	
	(c)			5 000 000 or 5×10^6 oe	2	B2	If not B2 then award B1 for 320000 or 3.2×10^5 oe or 5×10^n oe where $n \neq 6$
						Total 4 marks	

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Question	Working	Answer	Mark	Notes							
9	(a)		Fully correct table	2	B2 fully correct table (B1 for 4 or 5 or 6 correct entries)						
		1				1	2	3	4	5	6
		2				2	4	6	8	10	12
		3				3	6	9	12	15	18
	(b)				M1 for $\frac{a}{18}$ where $0 < a < 18$ or for $\frac{4}{b}$ where $b > 4$						
		$\frac{4}{18}$	2	A1 oe accept 0.22(2.....) or 22.(2.....)%							
	(c)	'8' '6' 18' 18 or '8', '6' or 0.4(4.), 0.3(3.) or 40%, 30% or better			M1 ft from their complete table for two figures that can be used for comparison, one of which must be correct						
		Yes oe with reason	2	A1							
					Total 6 marks						

Question	Working	Answer	Mark	Notes
10	(a)	1, 2, 4, 5, 8, 10, 20, 40 and 1, 2, 4, 8, 16, 32, 64 OR $2 \times 2 \times 2 \times 5$ and $2 \times 2 \times 2 \times 2 \times 2 \times 2$	2	M1 for start to list factors – must be at least 4 for each of 40 and 64 or prime factorisation of both numbers with at least 2 stages correct eg $40 = 2 \times 20 = 2 \times 4 \times 5$ could be numbers on tree or in table
				A1
				Total 2 marks

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Question	Working	Answer	Mark	Notes
11 (a)		Correct shape drawn	1	B1
(b)	7, 12, 17, 22, 27, 32, 37 or $5 \times 7 + 2$ or $17 + (4 \times 5)$ $7 + (6 \times 5)$			M1 for adding 5 and continuing to at least pattern 7 (allow one error) or for a correct diagram or any correct method which would lead to 37
		37	2	A1
(c)	7, 12, 17, 22, 27, 32, 37, 42, 47, 52, 57, 62 or $5n + 2 = 62$ or $62 \div 5 (= 12.4)$			M1 for continuing the sequence to at least 62 (list of values may be seen in earlier parts of question)
		12	2	A1
(d)	For identifying all terms in sequence end in 2 or 7 or none of the numbers end in 3 or method to count on as far as 122 e.g. No, 122 and 127 are both in sequence oe e.g. No, 122 in sequence or method to find n when term is 123 e.g. solving $5n + 2 = 123$ or $(123 - 2) \div 5 (= 24.2)$ or e.g. 121 not multiple of 5 or $121 \div 5$ not whole number/it's a decimal	No with reason	1	B1
				Total 6 marks

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Question		Working	Answer	Mark	Notes
12	(a)	$2 \times 7 + 3 \times -4$ or $14 + -12$ or $14 - 12$		2	M1
			2		A1
	(b)		e^4	1	B1
	(c)		y^{16}	1	B1
	(d)	$x^2 + 9x - 2x - 18$		2	M1 for 3 correct terms or 4 correct terms ignoring signs or $x^2 + 7x + c$ or + $7x - 18$
			$x^2 + 7x - 18$		A1
	(e)		$4cp^2(4c^3 + 5p)$	2	B2 if not B2 then award B1 for any correct factorisation with at least 2 factors outside the bracket eg $4cp(4c^3p + 5p^2)$, $cp^2(16pc^3 + 20p)$, $2p(8c^4 + 10cp^2)$ etc or the correct common factor and a 2 term expression with just one error
					Total 8 marks

Question		Working	Answer	Mark	Notes
13	(a)		Diameter	1	B1
	(b)		Chord	1	B1
	(c)		Sector shaded	1	B1 accept the semicircle shaded
					Total 3 marks

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Question		Working	Answer	Mark	Notes
14	(a)		triangle with vertices (6, 4) (6, 1) (4, 1)	2	B2 if not B2 then award B1 for a rotation of 180° about a different centre
	(b)		Reflection in $x = -1$	2	B1 Reflection B1 $x = -1$ NB. No marks if more than one transformation is stated or suggested with column vector, coordinate, SF, angle etc
					Total 4 marks

Question		Working	Answer	Mark	Notes
15	(a)		9, 3, (-1), -3, (-3), -1, (3)	2	B2 If not B2 then award B1 for at least 2 correct values
	(b)			2	M1 dep on B1 ft from (a) for at least 5 points plotted correctly
			correct graph		A1 for the correct graph (clear intention to go through all the points and which must be curved at the bottom)
					Total 4 marks

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Question	Working	Answer	Mark	Notes	
16	$48 \div 2 (=24)$		4	M1	
	"24" $\div 3 = 8$			M1 dep	M2 for "24" $\times \frac{5}{3}$
	"8" $\times 5$			M1 dep	
		40		A1	
	Alternative scheme				
	(5) : 3 : 6 oe		4	M1	
	$48 \div 6 (=8)$ oe			M1 dep	M2 for $48 \times \frac{5}{6}$
	"8" $\times 5$ oe			M1 dep	
		40		A1	
				Total 4 marks	

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Question	Working	Answer	Mark	Notes
17	$\frac{14}{3}$ and $\frac{10}{9}$ e.g. $\frac{14}{3}$ and $\frac{10}{9}$			M1 Both fractions expressed as improper fractions
	$\frac{14}{3} \times \frac{9}{10}$ e.g. $\frac{14}{3} \times \frac{9}{10}$			M1 or for both fractions expressed as equivalent fractions with denominators that are a common multiple of 3 and 9 eg. $\frac{42}{9} \div \frac{10}{9}$ or $\frac{126}{27} \div \frac{30}{27}$
	$\frac{14}{3} \times \frac{9}{10} = \frac{126}{30} = \frac{21}{5} = 4\frac{1}{5}$ e.g. $\frac{14}{3} \times \frac{9}{10} = \frac{126}{30} = 4\frac{6}{30} = 4\frac{1}{5}$ or $\frac{14^7}{3^1} \times \frac{9^3}{10^5} = \frac{21}{5} = 4\frac{1}{5}$ or $\frac{126}{27} \div \frac{30}{27} = \frac{126}{30} = \frac{21}{5} = 4\frac{1}{5}$	Shown	3	A1 Dep on M2 for conclusion to $4\frac{1}{5}$ from correct working – either sight of the result of the multiplication $\frac{126}{30}$ must be seen or correct cancelling prior to the multiplication to $\frac{21}{5}$ NB: use of decimals scores no marks
				Total 3 marks

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Question	Working	Answer	Mark	Notes
18	$2x + 0.18 + 2x + 3x + 0.26 + x = 1$ or $1 - (0.18 + 0.26) (= 0.56)$			M1
	$x = (1 - 0.18 - 0.26) \div (2 + 2 + 3 + 1) (=0.07)$			M1
	$(0.18 + 4 \times "0.07") \times 200$ or 0.46×200 or $36 + 42 + 14$ oe			M1 dep on M2 and probabilities between 0 and 1 $\frac{92}{200}$, oe with 92 seen
		92	4	A1
				Total 4 marks

Question	Working	Answer	Mark	Notes
19	$(8 =) 2 \times 2 \times 2$ or 2^3 or $23 + n$	2	M1	For clearly writing 8 as a product of prime factors or as 2^3
		$2^{n+3} \times 3 \times 5^m$	A1	
				Total 2 marks

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Performance data for Practice Test 1F (Set 10)

Qn	Mean score	Max score	Mean %	Edexcel averages: scores of candidates who achieved grade:						
				ALL	5	4	3	2	1	U
Q01	2.66	3	89	2.66	2.93	2.87	2.73	2.48	2.07	1.67
Q02	5.28	6	88	5.28	5.80	5.67	5.40	4.96	4.19	3.21
Q03	3.37	4	84	3.37	3.79	3.65	3.46	3.13	2.60	1.78
Q04	3.89	5	78	3.89	4.80	4.62	4.18	3.16	1.89	0.41
Q05	3.75	5	75	3.75	4.67	4.39	3.98	3.11	1.90	0.66
Q06	2.19	3	73	2.19	2.77	2.61	2.27	1.77	1.21	0.56
Q07	4.37	6	73	4.37	5.36	5.16	4.65	3.69	2.16	0.84
Q08	1.29	2	65	1.29	1.75	1.59	1.33	0.99	0.55	0.22
Q09	3.69	6	62	3.69	4.75	4.32	3.78	2.99	2.08	0.83
Q10	1.24	2	62	1.24	1.65	1.47	1.30	1.00	0.58	0.13
Q11	3.68	6	61	3.68	5.15	4.34	3.77	2.80	1.80	0.73
Q12	4.02	8	50	4.02	6.34	5.28	4.07	2.52	0.98	0.06
Q13	1.45	3	48	1.45	2.03	1.73	1.49	1.06	0.66	0.20
Q14	1.85	4	46	1.85	3.17	2.45	1.76	1.06	0.50	0.13
Q15	1.52	4	38	1.52	2.56	2.12	1.53	0.79	0.19	0.01
Q16	1.48	4	37	1.48	2.71	1.97	1.41	0.74	0.25	0.03
Q17	0.88	3	29	0.88	1.86	1.21	0.75	0.32	0.13	0.03
Q18	0.56	4	14	0.56	1.87	0.79	0.21	0.05	0.01	0.00
Q19	0.09	2	5	0.09	0.17	0.14	0.08	0.04	0.01	0.00
Total	47.26	80	59	47.26	64.13	56.38	48.15	36.66	23.76	11.50

Suggested grade boundaries

1MA1 Practice Tests (Set 10)			9	8	7	6	5	4	3	2	1
1F	Foundation tier	Paper 1F					60	51	42	30	18
2F/3F	Foundation tier	Paper 2F/3F					53	43	31	20	11
Total	Foundation tier						113	94	73	50	29

(Marks for papers 1F, 2F/3F are each out of 80.)