

Practice Tests Set 24 – Paper 2F-3F mark scheme

Qn	Working	Answer	Mark	Notes
1	eg $2.5 \text{ kg} = 2500 \text{ g}$ or $400 \text{ g} = 0.4 \text{ kg}$ or $350 \text{ g} = 0.35 \text{ kg}$		4	B1 for a correct conversion between g and kg
	eg $400 + 350 (= 750)$ or $0.4 + 0.35 (= 0.75)$ or $400 \times 2 (= 800)$ or $0.4 \times 2 (= 0.8)$			M1 for method to find the weight of parcel B or C ft incorrect conversion
	eg $2500 - (400 + \text{“750”} + \text{“800”})$ or $2.5 - (0.4 + \text{“0.75”} + \text{“0.8”}) (= 0.55)$			M1 for a complete method ft incorrect conversion
	<i>Correct answer scores full marks (unless from obvious incorrect working)</i>	550		A1
				Total 4 marks

Qn	Working	Answer	Mark	Notes
2	$15 - 6.90 (= 8.10)$ or $1500 - 690 (= 810)$		3	M1
	$\text{“8.10”} \div 0.55 (= 14.727\dots)$ or $\text{“810”} \div 55 (= 14.727\dots)$ or 15			M1
	<i>Correct answer scores full marks (unless from obvious incorrect working)</i>	14		A1
				Total 3 marks

Practice Tests Set 24 – Paper 2F-3F mark scheme

Qn	Working	Answer	Mark	Notes
3 (a)	eg 500×1.18		2	M1
	<i>Correct answer scores full marks (unless from obvious incorrect working)</i>	590		A1
(b)	eg $350 \div 1.40$		2	M1
	<i>Correct answer scores full marks (unless from obvious incorrect working)</i>	250		A1
				Total 4 marks

Qn	Working	Answer	Mark	Notes
4	eg $\frac{1}{4} \times 200 (= 50)$ or $\frac{2}{5} \times 200 (= 80)$ OR $\frac{43}{200}$		4	M1 for a method to find the beads for Bernadette or Claudio OR Derek's beads as a fraction
	eg $\frac{1}{4} \times 200 (= 50)$ and $\frac{2}{5} \times 200 (= 80)$ OR $\frac{43}{200} + \frac{1}{4} + \frac{2}{5} \left(= \frac{173}{200} \right)$			M1 for a method to find the beads for Bernadette and Claudio OR method to find the fraction of the 200 beads given away
	eg $200 - "50" - "80" - 43 (= 27)$ OR $1 - \frac{173}{200}$			M1 for a method to find the number of beads Asif has left OR $1 -$ the fraction of the 200 beads given away
	<i>Correct answer scores full marks (unless from obvious incorrect working)</i>	$\frac{27}{200}$		A1 cao
				Total 4 marks

Practice Tests Set 24 – Paper 2F-3F mark scheme

Qn	Working	Answer	Mark	Notes
5 (a)(i)		34	1	B1
(ii)		Added 6	1	B1 accept eg add 6, +6
(b)		76	1	B1
(c)		Correct explanation	1	B1 eg 467 is odd or the numbers in the sequence are even or $6n - 2$ or ..., 466, 472, ...
				Total 4 marks

Qn	Working	Answer	Mark	Notes
6	eg 10:50am + 45mins = 11:35am or 10:50am + 1hr10mins = 12:00pm or 2:20pm - 45mins = 1:35pm or 2:20pm - 1hr10mins = 1:10pm or 45mins + 1hr10mins = 1hr55mins or 115mins or 10:50am to 2:20pm = 3hr30mins or 210mins		3	M1 for correctly working with two times condone missing am or pm
	eg 10:50am + 45mins + 1hr10mins = 12:45pm or 10:50am + 1hr55mins = 12:45pm or 2:20pm - 45mins - 1hr10mins = 12:25pm or 2:20pm - 1hr55mins = 12:25pm			M1ft for getting to a time one step from the answer or 1hr35mins or a correct ft from a previous error condone missing am or pm
	<i>Correct answer scores full marks (unless from obvious incorrect working)</i>	95		A1
				Total 3 marks

Practice Tests Set 24 – Paper 2F-3F mark scheme

Qn	Working	Answer	Mark	Notes	
7 (a)	eg 60 : 24		2	M1 for any ratio equivalent to 60 : 24 or for an answer of 2 : 5	
	<i>Correct answer scores full marks (unless from obvious incorrect working)</i>	5 : 2		A1	
(b)		$\frac{3}{10}$	1	B1	
(c)	eg $20 \div 4 (= 5)$ or $20 \div 4 \times 11 (= 55)$ or $\frac{x}{11} = \frac{20}{4}$ or $\frac{x}{20} = \frac{11}{4}$		3	M1 for a correct first step	M2 for $\frac{20}{4} \times 15$
	eg $11 \times "5" + 20$ or $(11 + 4) \times "5"$			M1 for a complete method	
	<i>Correct answer scores full marks (unless from obvious incorrect working)</i>	75		A1	
				Total 6 marks	

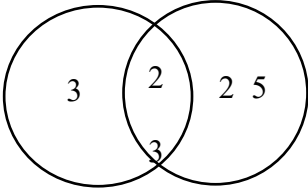
Qn	Working	Answer	Mark	Notes
8 (a)	$0.48031(4\dots) + 0.45555(5\dots)$ or $\frac{61}{127} + \frac{41}{90}$		2	M1 Evaluate either fraction correctly as a decimal to at least 5 sf (rounded or truncated) or as a simplified fraction or an answer of 0.935, 0.936, 0.9358 or 0.9359
	<i>Correct answer scores full marks (unless from obvious incorrect working)</i>	0.93587(05162)		A1 Correct to at least 5 sf (rounded or truncated)
(b)		0.936	1	B1 ft if at least 4 sf given in (a)
				Total 3 marks

Practice Tests Set 24 – Paper 2F-3F mark scheme

Qn	Working	Answer	Mark	Notes
9	$1600 \times 0.16 (= 256)$ oe or $1 - 0.16 (= 0.84)$ oe		4	M1
	$1600 - "256"$ or $1600 \times "0.84"$ (= 1344)			M1
	$\frac{"1344"}{1400} (= 0.96)$ or $\frac{1400 - "1344"}{1400} (= 0.04)$ or $\frac{"1344"}{1400} \times 100 (= 96)$ or $\frac{1400 - "1344"}{1400} \times 100$			M1
	<i>Correct answer scores full marks (unless from obvious incorrect working)</i>	4		A1 SCB1 for 1856 seen if no other marks awarded
				Total 4 marks

Qn	Working	Answer	Mark	Notes										
10	$2 \times 2 \times 2 \times 5 \times 5$ or 2, 2, 2, 5, 5 or $2 \times 2 \times 3 \times 5 \times 7$ or 2, 2, 3, 5, 7 or eg		2	M1 for one number written as a product of prime factors or prime factors listed – numbers may be at end of factor trees or on ‘ladder diagrams’ or in a table or in a Venn diagram or at least two factors for each (excluding 1, 200, 420)										
	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td>2</td> <td>200</td> <td>420</td> </tr> <tr> <td>2</td> <td>100</td> <td>210</td> </tr> <tr> <td>5</td> <td>50</td> <td>105</td> </tr> <tr> <td></td> <td>10</td> <td>21</td> </tr> </table>	2		200	420	2	100	210	5	50	105		10	21
2	200	420												
2	100	210												
5	50	105												
	10	21												
	<i>Correct answer scores full marks (unless from obvious incorrect working)</i>			Total 2 marks										

Practice Tests Set 24 – Paper 2F-3F mark scheme

Qn	Working	Answer	Mark	Notes												
11 (a)		1, 2, 5, 10	1	B1 in any order												
(b)	<p>18, 36, ... and 60, 120, ...</p> <p>or</p> <p>2 3 3 oe</p> <p>or</p> <p>2 2 3 5 oe</p> <p>or</p>  <p>or</p> <table border="1" data-bbox="398 746 624 900"> <tr> <td>2</td> <td>18</td> <td>60</td> </tr> <tr> <td>3</td> <td>9</td> <td>30</td> </tr> <tr> <td>5</td> <td>3</td> <td>10</td> </tr> <tr> <td></td> <td></td> <td>2</td> </tr> </table> <p>or</p> <p>2, 2, 3, 3, 5 oe</p>	2	18	60	3	9	30	5	3	10			2		2	<p>M1 for any correct valid method and no errors e.g.</p> <p>for starting to list at least two multiples of each number</p> <p>or</p> <p>2 3 3 seen</p> <p>or</p> <p>2 2 3 5 seen</p> <p>(may be in a factor tree or a ladder diagram and ignore 1)</p> <p>or</p> <p>a fully correct Venn diagram</p> <p>or</p> <p>other clear method, e.g, table, not be written as a product</p>
2	18	60														
3	9	30														
5	3	10														
		2														
	<i>Working required</i>	180		A1 accept $2^2 \times 3^2 \times 5$ oe												
				Total 3 marks												

Practice Tests Set 24 – Paper 2F-3F mark scheme

Qn	Working	Answer	Mark	Notes
12 (a)	$(T=) 2.5 \times 12 (+) 1.5 \times 5$		2	M1
	<i>Correct answer scores full marks (unless from obvious incorrect working)</i>	37.5		A1 Accept 38 with working shown
(b)	$55 = 2.5d + 1.5 \times 8$ or $55 - 1.5 \times 8 (= 43)$ or $55 - 12 (= 43)$		3	M1 Form a correct equation or subtract time taken for bus stops from 55
	$2.5d = 55 - 1.5 \times 8$ oe or $2.5d = 43$ oe or “43” $\div 2.5$ oe			M1 Isolate term in d in a correct equation or a correct calculation for journey length
	<i>Correct answer scores full marks (unless from obvious incorrect working)</i>	17.2		A1
				Total 5 marks

Qn	Working	Answer	Mark	Notes
13	$(ABD =) 360 - 52 - 112 - 90 (= 106)$		4	M1 may be marked in correct place on diagram
	$(CBD =) 180 - \text{“106”} (=74)$			M1 may be marked in correct place on diagram
		32		A1
		Reasons given		B1 dep on M1 At least two appropriate reasons given. “ <u>angles in a quadrilateral add to 360°</u> ” accept 4-sided shape. “ <u>angles on a straight line add to 180°</u> ” or angles on a straight <u>line</u> add to <u>180°</u> “ <u>angles in a triangle add to 180°</u> ” or <u>angles in a triangle</u> sum to 180° “base angles in an <u>isosceles triangle</u> (are equal)”
				Total 4 marks

Practice Tests Set 24 – Paper 2F-3F mark scheme

Qn	Working	Answer	Mark	Notes
14	eg $8 \times 12 (= 96)$ or $7 \times 3 (= 21)$ or $3 \times 15 (= 45)$ or $8 \times 9 (= 72)$ or $15 \times 12 (= 180)$ or $7 \times 9 (= 63)$		5	M1 for a method to find one relevant area accept 15 – 8 as 7 and 12 – 3 as 9
	eg “96” + “21” (= 117) or “45” + “72” (= 117) or “180” – “63” (= 117)			M1 for a complete method to find the total area
	eg $117 \div 7 (= 16.7... \text{ or } 17)$			M1 (indep) for a method to find the number of tins for their area ft from any value that has come from a calculation that includes at least 2 of the given dimensions
	eg “17” $\times 23.9$			M1 for a method to calculate the cost for their number of tins dependent on previous M1
	<i>Working required</i>	406.3(0)		A1 dep on M1
				Total 5 marks

Practice Tests Set 24 – Paper 2F-3F mark scheme

Qn	Working	Answer	Mark	Notes	
15 (a)	for 0.04×2000 oe (= 80) or 1.04×2000 oe (= 2080)	OR		3	M1 for finding 4% or 104% of 2000
	$1.04 \times$ “2080” oe (= 2163.2) $1.04 \times$ “2163.2” oe	2000×1.04^3 oe			M1 for completing method to find total amount in the account at the end of 3 years
	<i>Correct answer scores full marks (unless from obvious incorrect working)</i>		2250	A1 accept 2249 – 2250	
				SC: if no other marks gained award M1 for 0.12×2000 oe or 240 or 1.12×2000 oe or 2240 accept $(1 + 0.04)$ as equivalent to 1.04 throughout	
(b)	eg $1365 \div (1 - 0.09)$ or $1365 \div 0.91$		1500	3	M2 for a complete method
					(M1) for $1365 \div (100 - 9)$ (= 15) or $(100 - 9)\% = 1365$ or $91\% = 1365$ or eg $(1 - 0.09)T = 1365$ or eg $T - 0.09T = 1365$
	<i>Correct answer scores full marks (unless from obvious incorrect working)</i>			A1	
				Total 6 marks	

Practice Tests Set 24 – Paper 2F-3F mark scheme

Qn	Working	Answer	Mark	Notes
16 (a)		$48 < S \leq 54$	1	B1 Allow 48 – 54 oe
(b)	$(33 \times 4) + (39 \times 14) + (45 \times 18) + (51 \times 19) + (57 \times 5)$ or $132 + 546 + 810 + 969 + 285 (= 2742)$ [lower bound products are: 120, 504, 756, 912, 270] [upper bound products are: 144, 588, 864, 1026, 300]		4	M2 M2 for at least 4 correct products added (need not be evaluated) or If not M2 then award: M1 for consistent use of value within interval (including end points) for at least 4 products which must be added or correct midpoints used for at least 4 products and not added
	$\frac{"2742"}{60}$			M1 dep on M1 Allow division by their Σf provided addition or total under column seen
	<i>Correct answer scores full marks (unless from obvious incorrect working)</i>	45.7		A1oe $45\frac{7}{10}$ or $\frac{457}{10}$ (accept 46 from correct working)
				Total 5 marks

Practice Tests Set 24 – Paper 2F-3F mark scheme

Qn	Working	Answer	Mark	Notes
17	2.4 ÷ 0.4 (= 6) or 240 ÷ 40 (= 6) or 10 ÷ 0.4 (= 25) or 1000 ÷ 40 (= 25) or 40 × 40 × 40 (= 64 000) or 0.4 × 0.4 × 0.4 (= 0.064) or 1000 × 240 × 240 (= 57 600 000) or 10 × 2.4 × 2.4 (= 57.6) oe		3	M1 could show the number of boxes along the edge of a container – award marks if this is unambiguous.
	“6” × “6” × “25” oe or “57 600 000” ÷ “64 000” or “57.6” ÷ “0.064” oe			M1 fully correct method to find greatest number of boxes
	<i>Correct answer scores full marks (unless from obvious incorrect working)</i>	900		A1
				Total 3 marks

Qn	Working	Answer	Mark	Notes
18	eg $\pi \times 3^2 \times 7$ (= 63π or 197.9...)		3	M1 for method to find the volume of Solid A
	eg $\frac{2000}{[\text{vol A}]}$ or $\frac{3375}{450}$ (= 7.5 oe) or $\frac{2000+3375}{[\text{vol A}]+450}$			M1 (indep) for method to find the density of Solid A, B or C, allow use of their volume for Solids A and C
	<i>Correct answer scores full marks (unless from obvious incorrect working)</i>	8.3		A1 accept 8.29 – 8.31
				Total 3 marks

Practice Tests Set 24 – Paper 2F-3F mark scheme

Qn	Working	Answer	Mark	Notes
19			3	M1 For area of 2 different faces (ie not 2 triangles)
	$0.5 \times 4.8 \times 3.6 (= 8.64)$ oe or 4.8×3.6 if clear intention for this to be 2 triangles $7 \times 3.6 (= 25.2)$ $7 \times 4.8 (= 33.6)$ $7 \times 6 (= 42)$ (all measurements with intention to add)			M1 For adding together 5 areas , at least 4 of which are correct NB: $(3.6 + 4.8 + 6) \times 7 (= 100.8)$ is 3 faces
	<i>Correct answer scores full marks (unless from obvious incorrect working)</i>	118		A1 118.1 or 118.08
				Total 3 marks

Qn	Working	Answer	Mark	Notes	
20	$390 \div (8 - 2) (= 65)$ or $\frac{8}{15} - \frac{2}{15} = 390$ or $\frac{8}{15}x - \frac{2}{15}x = 390$ or $\frac{6}{15} = 390$ or $\frac{6}{15}x = 390$ oe		3	M1	M2 for $\frac{390 \times 15}{6}$ oe
	“65” $\times (2 + 5 + 8)$ oe or $\frac{1}{15} = 65$ or $\frac{1}{15}x = 65$ or $\frac{1}{5} = 195$ or $\frac{1}{5}x = 195$			M1 or for 975 seen with further work and a different answer	
	<i>Correct answer scores full marks (unless from obvious incorrect working)</i>	975		A1 SCB1 for 52, 130, 208 or 390, 975, 1560 (or 2925) or 97.5, 243.75, 390 (or 731.25)	
				Total 3 marks	

Practice Tests Set 24 – Paper 2F-3F mark scheme

Qn	Working	Answer	Mark	Notes
21	$55 \times 32 (= 1760)$ or $52 \times 28 (= 1456)$ or $55 \times 32 + 52 \times 28 (= 3216)$		3	M1 for one correct product or method to find the total mark for both classes
	eg $\frac{"1760"+"1456"}{32+28}$ or $\frac{3216}{60}$			M1 for a complete method
	<i>Correct answer scores full marks (unless from obvious incorrect working)</i>	53.6		A1
				Total 3 marks

Practice Tests Set 24 – Paper 2F-3F mark scheme

New Qn	Skill tested	Mean score	Max score	Mean %	Edexcel averages: scores of candidates who achieved grade:						
					ALL	5	4	3	2	1	U
1	Integers	3.36	4	84	3.36	3.88	3.67	3.25	2.68	1.71	1.40
2	Applying number	2.40	3	80	2.40	2.74	2.55	2.39	1.85	1.73	0.80
3	Applying number	3.29	4	82	3.29	3.76	3.37	3.35	2.93	1.67	1.60
4	Fractions	2.73	4	68	2.73	3.45	3.27	2.76	1.10	0.67	0.80
5	Sequences	3.26	4	82	3.26	3.54	3.22	3.34	2.70	3.05	2.20
6	Measures	2.11	3	70	2.11	2.43	2.34	2.03	1.58	1.33	0.40
7	Ratio and proportion	3.89	6	65	3.89	5.28	4.49	3.56	1.93	0.63	0.60
8	Degrees of accuracy	2.10	3	70	2.10	2.52	2.24	1.97	1.51	1.45	1.00
9	Percentages	2.30	4	58	2.30	3.41	2.82	1.86	0.62	0.05	0.00
10	Powers and roots	1.22	2	61	1.22	1.69	1.34	0.92	0.80	0.48	0.20
11	Integers	1.86	3	62	1.86	2.46	2.00	1.69	1.08	0.87	0.40
12	Expressions and formulae	3.18	5	64	3.18	4.32	3.15	2.88	2.10	1.59	0.40
13	Angles, lines and triangles	2.13	4	53	2.13	3.38	2.43	1.48	0.64	0.36	0.00
14	Mensuration of 2D shapes	2.55	5	51	2.55	4.23	2.81	1.78	0.62	0.14	0.00
15	Percentages	2.53	6	42	2.53	4.44	3.00	1.19	0.45	0.19	0.00
16	Statistical measures	2.12	5	42	2.12	3.83	2.13	1.23	0.59	0.10	0.00
17	3D shapes and volume	1.16	3	39	1.16	2.07	1.17	0.72	0.18	0.32	0.00
18	Measures	1.15	3	38	1.15	2.17	1.12	0.65	0.22	0.00	0.00
19	3D shapes and volume	0.72	3	24	0.72	1.57	0.67	0.19	0.05	0.00	0.00
20	Ratio and proportion	0.82	3	27	0.82	1.78	0.63	0.45	0.00	0.00	0.00
21	Statistical measures	0.86	3	29	0.86	1.92	0.61	0.35	0.08	0.00	0.00
	TOTAL	45.74	80	57	45.74	64.87	49.03	38.04	23.71	16.34	9.80

Suggested grade boundaries

Grade	5	4	3	2	1
Mark	57	44	31	20	13

