

Qn	Working	Answer	Mark	Notes
1		0.45	1	B1
				<b>Total 1 mark</b>
2		64	1	B1
				<b>Total 1 mark</b>
3		$\frac{3}{8}$	1	B1
				<b>Total 1 mark</b>
4	$0.14 \times 350 (= 49)$		3	M1
	'49' + 25 or $0.14 \times 350 + 25$			M1
		74		A1
				<b>Total 3 marks</b>
5 (a)	(DBC =) $180 - (93 + 42) (= 45)$ OR (x =) $93 + 42$		2	M1 for method to find angle <i>DBC</i> OR using exterior angle is equal to the sum of the two opposite interior angles
		135		A1
				<b>Total 2 marks</b>

Qn	Working	Answer	Mark	Notes
6	$12 \times 11.75 (= 141)$		3	M1
	$(181 - '141') \div 5$			M1
		8(.00)		A1
				<b>Total 3 marks</b>
7	$0.65 \times 300$ oe			M1
		195		A1 (SCB1 for 105)
				<b>Total 2 marks</b>
8 (a)	21 : 48		2	M1 or 16 : 7
		7 : 16		A1 cao
	(b)	$\frac{11}{15}$	1	B1 oe exact fraction
				<b>Total 3 marks</b>
9			2	M1 for 2.72(02...) or 26.01 or 8.67 or 11.4 or 11.39
		11.390(2941)		A1
				<b>Total 2 marks</b>

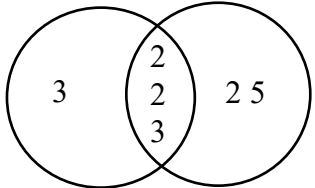
Qn	Working	Answer	Mark	Notes
10	$0.18 \times 1600 (= 288)$ oe or $0.82 \times 1600 + 800 (= 2112)$		3	M1 if $1600 \times 18\%$ seen, must have further processing of the 18% or the value (288) given.
	$0.125 \times (1600 + 800) (= 300)$ oe or $(1600 + 800) \times 0.875 (= 2100)$			M1
		Coupon B and correct figures seen		A1 for Coupon B and 288 and 300 or 18.75(%) and 18(%) or 12(%) and 12.5(%) or 2112 and 2100
				<b>Total 3 marks</b>

11 (a)	$1 - (0.24 + 0.16 + 0.38)$ oe		2	M1
		0.22		A1 oe
(b)	$0.24 + 0.16 (= 0.4)$ oe		2	M1
		0.4		A1 oe
				<b>Total 4 marks</b>

Qn	Working	Answer	Mark	Notes
12	$5 \times 4.2 - 6 \times -2.5$ or $21 - -15$ or $21 + 15$ oe		2	M1
		36		A1
				<b>Total 2 marks</b>
13 (b)(i)	$360 - (90 + 100 + 114)$ oe		2	M1 for a complete method to find $y$
		56		A1
(ii)		<u>Angles</u> at a <u>point</u> sum to $360^\circ$	1	B1
				<b>Total 3 marks</b>
14	$175 + 175 + 175 + 330 (= 855)$ or $\frac{330}{'855'}$		3	M1
	$\frac{330}{175 + 175 + 175 + 330} \times 100$ or $\frac{330}{'855'} \times 100$			M1
		38.6		A1 Answers in range 38.59 to 38.6
				<b>Total 3 marks</b>

Qn	Working	Answer	Mark	Notes
15	$3 \times 1000 (= 3000)$ or $225 \div 1000 (= 0.225)$		4	M1
	“3000” $\div 225 (= 13.3\dots)$ oe or $3 \div 0.225 (= 13.3\dots)$ oe			M1
	“3000” – (“13” $\times 225$ ) or $[3 - (13 \times “0.225”)] \times 1000$			M1 for a complete method
		75		A1
				<b>Total 4 marks</b>

16 (i)	$360 - (92 + 44) (= 224)$ oe or $92 + 44 + x + x = 360$ oe		3	M1
	‘224’ $\div 2$ or $2x = ‘224’$ oe			M1
		112		A1
(ii)		Correct reason	1	B1 dep on M1 for a correct reason <u>Angles in a quadrilateral sum to <math>360^\circ</math></u> (accept <u>Angles in a quadrilateral sum to <math>360^\circ</math></u> )
				<b>Total 4 marks</b>

Qn	Working	Answer	Mark	Notes												
17	<p>36, 72, 108, ... <b>and</b> 120, 240, 360, ...</p> <p><b>or</b></p> <p>2, 2, 3, 3 <b>and</b> 2, 2, 2, 3, 5</p> <p><b>or</b></p>  <table border="1" data-bbox="815 517 1043 671"> <tr> <td><b>2</b></td> <td>36</td> <td>120</td> </tr> <tr> <td><b>2</b></td> <td>18</td> <td>60</td> </tr> <tr> <td><b>3</b></td> <td>9</td> <td>30</td> </tr> <tr> <td></td> <td><b>3</b></td> <td><b>10</b></td> </tr> </table> <p><b>or</b> <math>\frac{36 \times 120}{12}</math> <b>or</b> 2, 2, 2, 3, 3, 5 oe</p>	<b>2</b>	36	120	<b>2</b>	18	60	<b>3</b>	9	30		<b>3</b>	<b>10</b>		2	<p>M1 for any correct valid method e.g. for starting to list at least <b>three</b> multiples of each number</p> <p>2, 2, 3, 3 <b>and</b> 2, 2, 2, 3, 5 seen (may be in a factor tree or a ladder diagram and ignore 1) (Allow <math>2 \times 2</math> as 4)</p> <p><b>or</b> a fully correct “Venn” diagram</p>
<b>2</b>	36	120														
<b>2</b>	18	60														
<b>3</b>	9	30														
	<b>3</b>	<b>10</b>														
		360		A1 or $2^3 \times 3^2 \times 5$ oe (allow $2^3 \cdot 3^2 \cdot 5$ )												
				<b>Total 2 marks</b>												

18	<p><math>24 \div 4 (= 6)</math> <b>or</b> width = 24</p> <p><math>10 \times '6'</math> oe <b>or</b></p> <p><math>24 + 24 + 6 + 6</math> oe</p>		3	<p>M1 Could be clearly shown on diagram.</p> <p>M1 dep M1</p>
		60		A1 SC if no other marks scored B1 for $24 \times 4 (= 96)$
				<b>Total 3 marks</b>

Qn	Working	Answer	Mark	Notes
19	$720 \div 12 (= 60)$ or $78 \times 12 (= 936)$		4	M1
	$78 - '60' (= 18)$ or $'936' - 720 (= 216)$	$'x' \times 720 = 936$ or $720(1 + \frac{P}{100}) = '936'$ or $('x' =) \frac{'936'}{720} (= 1.3)$ oe		M1
	$\frac{'18'}{60} \times 100$ or $\frac{'216'}{720} \times 100$	$'1.3' \times 100 - 100$ oe or $(1.3 - 1) \times 100$		M1 complete method to find $P$
		30		A1 ignore extra % sign if given by candidate.
				<b>Total 4 marks</b>

20	$0.4 \times 2500 (1000)$ or $0.6 \times 2500 (= 1500)$ oe		4	M1 for finding 40% or 60% of 2500
	$2500 - "1000" - 300 (= 1200)$ oe or $"1500" - 300 (= 1200)$ oe			M1 for method to find the remaining money
	$"1200" \div (3 + 7) \times 7$ oe			M1 for method to find the amount of money spent on food
		840		A1
				<b>Total 4 marks</b>

Qn	Working	Answer	Mark	Notes
21	eg $360 - (160 + 90) (= 110)$	eg $360 \times \frac{400}{160} (= 900)$ oe or $90 \times \frac{400}{160} (= 225)$ oe	3	M1 method to calculate angle for Sandeep <b>or</b> total number of votes <b>or</b> for number of votes for Anjali
	eg $\frac{400}{160} \times '110'$ oe	'900' - '225' - 400		M1 complete method to calculate number of votes for Sandeep
		275		A1
				<b>Total 3 marks</b>

22 (a)		1	1	B1
(b)		6	1	B1
(c)	$206 + m - 214 = -3$ oe or $\frac{7^{-3} \times 7^{214}}{7^{206}}$ or $\frac{7^{211}}{7^{206}}$ oe		2	M1 allow $7^{206+m-214} = 7^{-3}$ oe (must be in the form $7^x = 7^y$ where $x$ and $y$ are correct expressions)
		5		A1 accept $7^5$
				<b>Total 4 marks</b>



Qn	Working	Answer	Mark	Notes
23 (a)		140	1	B1 accept 138 – 142 May be seen on diagram.
(b)	[5.8, 6.2]		4	M1
	'[5.8, 6.2]' × 500 (= '[2900, 3100]')			M1 ft
	'[2900, 3100]' ÷ 0.44			M1 ft
		6818		A1 ft answer in range 6590-7045 but must be an integer
				<b>Total 5 marks</b>

24	<p>A Venn diagram with two overlapping circles, B and T. Circle B is on the left and contains the number 13. Circle T is on the right and contains the number 9. The intersection of the two circles contains the number 18. The number 10 is written outside circle T, in the region to its right. Each number is positioned above a horizontal dotted line.</p>	3	B3 for a fully correct Venn diagram (B2 for 3 correct values) (B1 for 1 or 2 correct values)
<b>Total 3 marks</b>			

Qn	Working	Answer	Mark	Notes	
25	$7200 \times 0.025 (= 180)$ or $7200 \times 1.025 (= 7380)$ oe or $7200 \times 1.075 (= 7740)$ oe or $7200 \times 0.075 (= 540)$ oe		3	M1	M2 for $7200 \times (1.025)^3$
	$(7200 + '180') \times 0.025 (= 184.5)$ and $(7200 + '180' + '184.5') \times 0.025 (= 189.1125)$ and $7200 + '180' + '184.5' + '189.1125' (= 7753.6125)$			M1 NB year end values are 7380 and 7564.5(0) 7753.6125	
		7754		A1 answer in range 7753 – 7754	
				<b>Total 3 marks</b>	

26	$0 \times 5 + 1 \times 5 + 2 \times 3 + 3 \times 10 + 4 \times 7 + 5 \times 6 (= 99)$ <b>or</b> $0 + 5 + 6 + 30 + 28 + 30 (= 99)$		3	M1	for at least 4 correct products with intention to add
	"99" ÷ 36			M1	
		2.75		A1	oe If no other marks awarded, award SC B1 for 2.8(88...)
				<b>Total 3 marks</b>	

Qn	Working	Answer	Mark	Notes
27	$65 \times 35 \times 45 (= 102\,375)$ and $5 \times 5 \times 5 (= 125)$ or $(65 \div 5) (= 13)$ , $(35 \div 5) (= 7)$ and $(45 \div 5) (= 9)$		3	M1
	'102 375' $\div$ '125' or '13' $\times$ '7' $\times$ '9'			M1
		819		A1
				<b>Total 3 marks</b>
28		$5^2 \times 7^4 \times 11$	2	B2 for $5^2 \times 7^4 \times 11$ (in any order) (B1 for 660 275 or correct unsimplified product or $5^a \times 7^b \times 11^c$ where 2 of $a$ , $b$ and $c$ are correct)
				<b>Total 2 marks</b>

Qn	Working	Answer	Mark	Notes
----	---------	--------	------	-------

Qn	Mean score	Max score	Mean %	Edexcel averages: scores of candidates who achieved grade:						
				ALL	5	4	3	2	1	U
1	0.97	1	97	0.97	1.00	1.00	0.95	0.92	0.71	0.00
2	0.92	1	92	0.92	0.99	0.98	0.86	0.77	0.29	0.00
3	0.64	1	64	0.64	0.81	0.57	0.49	0.38	0.29	0.00
4	2.67	3	89	2.67	2.88	2.69	2.70	2.54	0.57	0.00
5	1.53	2	77	1.53	1.86	1.75	1.10	0.81	0.64	0.00
6	2.71	3	90	2.71	2.89	2.57	2.86	2.38	1.29	1.50
7	1.65	2	83	1.65	1.84	1.68	1.38	1.38	1.36	1.33
8	2.23	3	74	2.23	2.75	2.46	1.54	0.85	0.14	0.00
9	1.60	2	80	1.60	1.77	1.53	1.54	1.50	1.18	0.67
10	1.93	3	64	1.93	2.59	2.24	0.86	0.23	0.00	0.00
11	2.95	4	74	2.95	3.77	2.93	2.05	1.54	0.58	0.00
12	1.39	2	70	1.39	1.69	1.43	1.19	0.62	0.00	0.00
13	1.79	3	60	1.79	2.12	1.96	1.57	1.12	0.36	0.00
14	1.77	3	59	1.77	2.52	1.70	0.76	0.54	0.29	0.50
15	2.50	4	63	2.50	3.25	2.26	2.18	0.88	1.27	0.67
16	2.57	4	64	2.57	3.65	2.23	1.57	0.61	0.43	0.00
17	1.06	2	53	1.06	1.40	1.08	0.82	0.44	0.18	0.00
18	1.80	3	60	1.80	2.38	1.56	1.16	1.15	0.71	0.50
19	2.25	4	56	2.25	3.05	1.93	1.57	1.00	0.43	0.00
20	2.05	4	51	2.05	3.15	1.83	0.77	0.88	0.55	0.00
21	1.60	3	53	1.60	2.21	1.37	1.05	0.69	0.14	0.00
22	2.01	4	50	2.01	2.90	1.81	0.89	0.77	0.29	1.00
23	2.72	5	54	2.72	4.05	2.24	1.52	0.39	0.00	0.00
24	1.52	3	51	1.52	1.95	1.34	1.21	1.00	0.91	0.67
25	1.48	3	49	1.48	2.32	1.30	0.43	0.23	0.00	0.00
26	1.39	3	46	1.39	2.23	1.25	0.51	0.31	0.00	0.00
27	1.25	3	42	1.25	2.10	0.96	0.19	0.23	0.00	0.00

Qn	Working				Answer				Mark	Notes
----	---------	--	--	--	--------	--	--	--	------	-------

28	0.58	2	29	0.58	0.78	0.42	0.54	0.38	0.27	0.00
	<b>49.53</b>	<b>80</b>	<b>50</b>	<b>49.53</b>	<b>64.90</b>	<b>47.07</b>	<b>34.26</b>	<b>24.54</b>	<b>12.88</b>	<b>6.84</b>

Suggested grade boundaries

<b>Grade</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
Mark	56	41	29	19	10