
COMMERCIAL STUDIES

7101/21

Paper 2 Arithmetic

October/November 2016

MARK SCHEME

Maximum Mark: 100

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the October/November 2016 series for most Cambridge IGCSE[®], Cambridge International A and AS Level components and some Cambridge O Level components.

Page 2	Mark Scheme	Syllabus	Paper
	Cambridge O Level – October/November 2016	7101	21

1	(a)	- 20.3	2	M1 6.9 – 27.2
	(b)	37.97	2	B1 37.971
	(c)	0.0141	2	B1 0.1409...or B1 for rounding their > 4 fig ans to 3 sf
2	(a)	9680	3	M1 60500 × 5 M1 × 3.2/100
	(b)	30470.89	4	M1 28900 × 1.78/100 (= 29414.42) M1 29414.42 × 1.78/100 (= 29937.99668) M1 29937.99668 × 1.78/100 or M3 28900(1 + 1.78/100) ³
3	(a)	32p	2	Allow £0.32 M1 2080 ÷ 6500
	(b)	0.83	1	
	(c)	1726.40	2	M1 2080 × 0.83 allow 1726
4	(a)	12306.25	4	M1 9500 × 0.8 A1 7600 M1 <i>their</i> 7600 × 0.97
	(b)	417.10	6	M1 38 × 8.60 (=326.80) M1 45 – 38 (=7) then either M1 8.60 × 1½ (=12.90) M1 1½ × 7 M1 7 × 12.90 (=90.30) M1 “10.5” × 8.60 M1 “326.80” + “90.30” M1 “326.8” + “90.3”
5		5	B1 Bars equal width M1 Bars labelled correctly M3 All heights correct (-1 eeo)	
6	45.5	8	Allow 45h.30min oe (not 45.3) M1 4 × 8.5 (=34) M1 1 × 5.5 for Thurs M1 1 × 4 M1 1 × 2 A2 for 4 correct subtotals (-1 eeo) M1 Adding their subtotals	
7	27.5	7	M1 740 × 1.125 (=832.50) M1 15.50 × 5 (=77.50) M1 “832.50” + “77.50” + 10 (=920) M1 1173 – <i>their</i> 920 A1 253 M1 <i>their</i> 253 ÷ 920 × 100	
8	68.50	5	M1 0.125 × 580 (=72.50) M1 12 × 48 (= 576) M1 “72.50” + “576” (=648.50) M1 “648.50” – 580	
9	(a)	1146	3	M1 20000 ÷ 17.45 A1 1146.13 B1 Rounding their value correct to nearest £
	(b)	272	4	B1 68 M1 0.75 × 68 (= 51) M1 68 + 4 × <i>their</i> 51 or M1 0.75 × 4 × 68 (=204) M1 68 + “204”

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10 (a)	50 or \$0.50	4	M1 $16 + 10 + 1 (= 27)$ M1 $135 \div 27 (= 5)$ M1 10×5
(b)	51.25 cents	3	M2 $58 \times 164/185.6$ or M1 $164 \div 185.6$ depM1 $\times 58$
11 (a)	660	2	M1 $0.3/100 \times 220000$
(b)	60	2	M1 $0.12/100 \times 50000$
(c)	54.72	5	M1 $(a) + (b) (=720)$ M1 <i>their</i> $720 \times 0.95 (=684)$ M1 $"684" \times 0.96 (=656.64)$ M1 <i>their</i> $656.64 / 12$
Section B			
12 (a)	300	3	M1 $83\frac{1}{3} \div 100$ M1 $\times 360$
(b)	382500	3	M1 $51000 \div 13\frac{1}{3}$ M1 $\times 100$
(c)	6	3	M1 $0.015 \div 100$ M1 $\times 40000$
(d)	22900	3	M1 Σ values $(=137400)$ M1 $\div 6$
13 (a)	16.5	5	M1 $150 \times 90 (=13500)$ M1 $75000 + 52000 + \textit{their} 13500 (= 140500)$ M1 $157000 - "140500" (= 16500)$ M1 $"16500" \div 1000$
(b)	65000	2	M1 $52000 \div 0.8$
(c)	11.04	5	M1 $896 \div 640$ A1 1.4 A1 1hr 24 min M1 $09.40 + 1.24$
14 (a)	August	1	
(b)	77.27(27...) ft	6	M1 Dec value $15.5 - 15.7$ M1 Jul value $8.7 - 8.9$ M1 $"15.6" - "8.6" (=6.8)$ M1 <i>their</i> $6.8 \div \textit{their} 8.8$ M1 $\times 100$ M1 $7.20 \times 0.99 (=7.128)$ M1 $13.20 \times 1.01 (= 13.332)$ M1 $13.332 - 7.128 (= 6.204)$ M1 $\times 650$
(c)	4032.60	5	
15 (a)	24620	4	M1 0.0525 M1 $\times 88000 (=4620)$ M1 $+ 20000$
(b)	19220	8	M1 $1800 \times 12 (=21600)$ M1 $21600 - 8500 (=13100)$ M1 $3000 \times 0.12 (=360)$ M1 $13100 - 3000 (=10100)$ M1 $10100 \times 0.2 (=2020)$ M1 $2020 + 360 (=2380)$ M1 $21600 - 2380$