

**MARK SCHEME for the October/November 2011 question paper
for the guidance of teachers**

7101 COMMERCIAL STUDIES

7101/02

Paper 2 (Arithmetic), maximum raw mark 100

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 must be read in conjunction with the question papers and the report on the examination.

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Section A

1	(a) 121.95 oe	3	B1 43.95 B1 78
	(b) (i) 0.625	2	M1 $5 \div 8$ or 0.625 seen in working
	(ii) 62.5	1	A1 $\sqrt{\quad}$
	(c) 15	3	B2 15.6(...) or M1 figs $5 \div$ figs 32
2	(a) (i) 1.39	3ft	M1 2.35×59 or 2.35×0.59 A1 138.65 or 1.3865
	(ii) 56	3ft	M1 59×0.957 or $59 - (59/100) \times 4.3$ A1 56.463
	(b) 20.93	3	M1 $100 - 29.2$ or 70.8% M1 $(14.82/“70.8”) \times 100$
3	(a) 3.5	3	M1 $294 \div 2$ M1 $(“147”/4200) \times 100$ or M1 $294 = (4200 \times R \times 2)/100$ M1 $294 \times 100/(4200 \times 2)$
	(b) (i) 414.4(0)	3	M1 148/125 M1 “1.184” $\times 350$ or M1 125/148 M1 350/“0.844...”
	(ii) 175	3	M1 490/350 or 490/“414.4” M1 “1.4” $\times 125$ or “1.1824...” $\times 148$
4	(a) (i) 4 : 8 : 3	2	B1 $\times : 2\times : \frac{3}{4}\times$ in any order
	(ii) 38 096	3	M1 largest/total M1 “8/15” $\times 71\ 430$ oe
	(iii) 15 385.5(0)	3	M1 smallest/largest M1 “3/8” $\times 41\ 028$ oe
	(b) 17 630	3	M2 $21\ 500 \times 0.82$ or B1 0.82 or 82% or 82/100 or M2 $21\ 500 - 21\ 500 \times 18/100$ or B1 3870
5	(a) May 12 www	6	B1 correct date shift column M1 products M1 Σ products B1 30 000 M1 “ Σ ”/“30 000”
	(b) 20 392.32	6	M1 400×60 A1 24 000 M1 $0.86 \times “24\ 000”$ A1 20 640 M1 $0.988 \times “20\ 640”$ or M1 $0.988 \times “24\ 000”$ A1 23 712 M1 $0.86 \times “23\ 712”$
6	(a) Allow 1170.68 or 1170.69	8	M1 $(540\ 000 \div 20\ 000) \times 36.15$ A1 976.05 M1 $(25\ 000 \div 5000) \times 51.25$ A1 256.25 M1 “976.05” + “256.25” A1 1232.3(0) M1 $0.95 \times “1232.3(0)”$
	(b) 152 000 or 0.152 million	6	M1 figs 38×1.82 A1 6.916 or 6 916 000 M1 “figs 6916” $\div 1.75$ A1 3.952 or 3 952 000 M1 “figs 3952” – figs 3.8

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7	(a) 17 250 000 10 800 000 6 750 000 5 700 000	4	B1 B1 B1 B1
	(b) (i) 67 680 000	2	M1 114 680 000 – 47 000 000
	(ii) 11.9(288...)	4	M1 “67 680 000” – 54 000 000 A1 13 680 000 M1 (“13 680 000” ÷ 114 680 000) × 100
(c) 1 915 200	2	M1 “13 680 000” × 0.14	

Section B

8	(a) 32	4	M1 $6\frac{2}{3}$ or 6h40m × 4 M1 $5\frac{1}{3}$ or 5h20m M1 “ $26\frac{2}{3}$ ” + “ $5\frac{1}{3}$ ” (26h40m)
	(b) 281.6(0)	2	M1 22×12.80
	(c) (i) $8.\underline{6}$ or ft (ii) 13.44	4ft 2	M1 $2\frac{3}{4}$ or 2h 45m M1 (“ $2\frac{3}{4}$ ” ÷ (a)) × 100 A1 8.59(375...) B1 \checkmark M1 1.05×12.80 or $12.80 + (5/100) \times 12.80$
9	(a) (i) 4.15	1	
	(ii) 4.26	2	M1 mention of $3\frac{1}{2}$ th value or $(4.15 + 4.37) \div 2$
	(iii) 4.5	4	M1 identifying 4.37, 4.52 and 4.61 M1 Σ 3 terms M1 “ Σ ” ÷ 3
(b) $639\bar{6}$	5ft	M1 5600×1.0453 M1 $\times 1.0453$ M1 $\times 1.0453$ A1 6396.0(35686...) B1 \checkmark	
10	(a) 80 85 125 160 195	4	B3 for 4 correct values B2 for 3 correct values B1 for 2 correct values
	(b) (i) line for option B	4	B1 (200,90) plotted B1 (0, their 80) or (500, their 90) plotted B1 for correct ruled line segment from (0,80) to (200,90) B1 for correct ruled line segment from (200,90) to (500,195)
	(ii) option B	1ft	
(c) 371	3	M1 $46/(0.35 - 0.08)$ M1 $200 + “170.37”$ or SC3 370 to 372 without working (from graph)	

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11	(a) 8428.16	4	M1 6500×1.28 A1 8320 M1 "8320" $\times 1.013$
	(b) 273	2	M1 6500×4.2 or 6500×0.042
	(c) 6.25	3	M2 $(1.36 - 1.28) \times 100/1.28$ or M1 $1.36 - 1.28 = 0.08$ OR M2 $(136 - 128) \times 100/128$ or M1 $136 - 128 = 8$
	(d) 1.32		M1 $6209.28 \div 0.98 (= 6336)$ M1 "6336" $\div 4800$ or $6209.28 \div 4800 (= 1.2936)$