Finance Problems

Mark Scheme 4

Level	IGCSE
Subject	Maths (0580)
Exam Board	Cambridge International Examinations (CIE)
Paper Type	Extended
Topic	Number
Sub-Topic	Finance Problems
Booklet	Mark Scheme 4

Time Allowed: **80 minutes**

Score: **/66**

Percentage: **/100**

Grade Boundaries:

A*	A	B	C	D	E	U
>85%	75%	60%	45%	35%	25%	<25%

1 (a)	**(i)** $\frac{1380}{62+53}\times 62$	1	Allow 115 for 62 + 53
	(ii) 7.27 (7.271 to 7.272)	1	
	(iii) 42	2	M1 for $\frac{3150}{75}$ oe
(b)	**(i)** 235	3	B2 for angle ACS = 55 or angle ACN = 125 B1 for 55 seen
	(ii) 12.6 (12.58 to 12.59)	3	M2 for $\frac{4}{6}\times 18.9$ or $4+4+2\times 4\times\cos 55$ or $4+4+2\times 4\times\sin 35$ oe (M1 for $\frac{4}{6}$ soi or $2\times 4\times\cos 55$ or $2\times 4\times\sin 35$ soi oe)
(c)	1500		M2 for $\frac{1380}{1-0.08}$ oe (M1 for recognition that 92% = 1380)

2	**(**a) 20200	2	**M1** 65 × 300 + 700
	(b) 1260	2	**M1** 71190 / 56.5

3	**(a** 200 ÷ 10 × 3 oe 200 ÷ 10 × 2 oe	M1 M1	
	(b) 65	2	**M1** for $\frac{39}{60}\times 100$ oe 35 is **M0**
	(c) 46	3	**M2** for 36.80 ÷ 0.8 oe or **M1** for 80% = 36.80 oe
	(d) 0.6(0)	3	**M2** for $5(x + 12) + 2x = 64.2$ oe or $(64.2 – 5 \times 12) \div 7$ or $5x + 2(x – 12) = 64.2$ oe or $(64.2 + 2 \times 12) \div 7$ or **M1** for $y = x + 12$ and $5y + 2x = 64.2$ or $y = x – 12$ and $5x + 2y = 64.2$ After **M0, SC1** for $k(x \pm 12)$ seen

4 **(a) (i)**	($) 6 000	**B2**	**M1** for 0.1 × 10 000 + 0.25 × 20 000 oe
(ii)	15 (%)	**B2**	**M1** for $\frac{\textit{their(a)(i)}}{40000} \times 100$
(b)	**($) 11 200**	**B1 ft**	ft 17200 – *their* **(a)(i)**
(c) (i)	($) 7500 cao	**B2**	**M1** for $\frac{12000}{5+3} \times 5$ oe After **M0**, **SC1** for 4500
(ii)	9/80 cao	**B1**	Ignore decimals or %'s seen Mark final fraction
(d)	**($) 8640**	**B2**	**M1** for 10 800 ÷ 1.25 oe **[10]**

5 **(a) (i)**	385 × 0.9 oe ($) **346.5(0)** c	**M1** **A1**	Implied by ans 346 or 347 www2
(ii)	385 ÷ 1.1(0) oe ($) **350** **cao**	**M1** **A1**	 www2
(b) (i)	$\frac{23}{23+19} \times 210$ oe **115** cao	**M1** **A1**	 www2
(ii)	their (i) × 2.50 + (210 – their (i)) × 1.50 ($) 430 cao	**M1** **A1**	(287.5 + 142.5) www2
(iii)	{their (ii) – 410} / 410 (×100)oe 4.88	**M1** **A1**	Dep on (ii) being greater than 410 www2 (4.878 …) After M0, SC1 for 104.9 or better or 4.9 ww
(c)	2.6(210 – *x)* or 1.4(210 – *x*) seen 2.6(210 – *x*) + 1.4*x* = 480 546 – 480 = 2.6*x* – 1.4*x* **or** 2.6*x* – 1.4*x* = 480 – 294 **55** cao	**M1** **M1** **M1** **A1**	 Allow 2.6*x* + 1.4 (210 – *x*) = 480 Dep on M2 if trial and error, B4 or B0 if using simultaneous equations $x + y = 210$ M1 $1.4x + 2.6y = 480$ M1 variable eliminated by correct method M1d After 0 scored, SC2 for ans 155 **[14]**

6	**(a)**	1216	**B1**	
	(b)	1.47	**B1**	
	(c)	$\frac{11.5-9.75}{11.5}\times 100$	**M1**	
		15.2	**A1**	ww2 SC1 for 17
	(d)	$4347\div 7$ o.e.	**M1**	
		621	**A1**	ww2
	(e)	$4347\div 0.9$ o.e.	**M1**	
		4830	**A1**	ww2
	(f)(i)	$\frac{2350}{3.25}$ o.	**M1**	Must deal with the minutes correctly
		723 to 723.1	**A1**	ww2
	(ii)	200.9 to 201	**A1ft**	their **(i)** ÷ 3.6 r.o.t. to 3sf or better
				[11]

7	450		**M1** for 3000 x 7.5 x 2/100

8	I = mr/5	2*	**M1** for $\frac{240\times r\times m}{100\ (\times 12)}$ o.