

# Finance Problems

## Mark Scheme 5

Level	IGCSE
Subject	Maths (0580)
Exam Board	Cambridge International Examinations (CIE)
Paper Type	Extended
Topic	Number
Sub-Topic	Finance Problems
Booklet	Mark Scheme 5

**Time Allowed:** 53 minutes

**Score:** /44

**Percentage:** /100

**Grade Boundaries:**

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

<b>1</b>	<b>(a) (i)</b>	1245 [pm]	<b>2</b>	<b>B1</b> for 2045 seen or 845 pm seen or [0]135 seen
	<b>(ii)</b>	788 or 787.8 to 788.1	<b>2</b>	<b>M1</b> for $8800 \div 11\text{h } 10\text{ mins oe}$
	<b>(b) (i)</b>	4230[.00]	<b>2</b>	<b>M1</b> for $2350 \div 5\text{ oe}$
	<b>(ii)</b>	22.2 or 22.2...	<b>1</b>	
	<b>(c) (i)</b>	3808 final answer	<b>2</b>	<b>M1</b> for $2240 \times \frac{100+70}{100}\text{ oe}$
	<b>(ii)</b>	800	<b>3</b>	<b>M2</b> for $2240 \div \frac{100+180}{100}\text{ oe}$ or <b>M1</b> for 2240 associated with 280%
	<b>(d) (i)</b>	1130	<b>4</b>	<b>M3</b> for $(826.5[0] - 12 \times (28 + 6.5[0])) \div 1.25\text{ seen}$ or <b>M2</b> for $826.5[0] - 12 \times (28 + 6.5[0])\text{ seen}$ or <b>M1</b> for $12 \times (28 + 6.5[0])\text{ seen}$
	<b>(ii)</b>	\$146.9[0] final answer	<b>2FT</b>	<i>their</i> (d)(i) $\times 0.13$ correctly evaluated If answer not exact to at least 3 sf or better <b>M1</b> for <i>their</i> (d)(i) $\div 10 \times 1.3$



<p>2 (a) (i) 36 600</p> <p>(ii) <math>16\frac{2}{3}</math> or 16.7 [16.66 to 16.67]</p> <p>(b) 1 231 708 final answer nfw</p> <p>(c) 27.2[0] nfw</p>		<p>3 M2 for <math>6100 \div 2 \times (2 + 7 + 3)</math> oe or M1 for <math>6100 \div 2</math> soi</p> <p>1</p> <p>5 M4 for <math>5964 \times 15 + 28400 \times 35 + 8236 \times 18</math> or M3 for <math>5964 \times 15</math> and <math>28400 \times 35</math> or for <math>5964 \times 15 + 42\,600 \times</math> <i>their</i> decimal <math>\frac{2}{3}</math> <math>\times 35 + (42\,600 - 5964 - 42\,600 \times</math> <i>their</i> decimal <math>\frac{2}{3}) \times 18</math> or M2 for <math>5964 \times 15</math> or <math>28400 \times 35</math> or for <math>42\,600 \times</math> <i>their</i> decimal <math>\frac{2}{3} \times 35</math> or M1 for <math>0.14 \times 42\,600</math> or <math>42\,600 \div 3 \times 2</math></p> <p>5 M for <math>23.80 \div 0.7</math> oe or M1 for 23.80 associated with 70% oe and M2 for <i>their</i> <math>(23.80 \div 0.7) \times 0.8</math> or M1 for <i>their</i> <math>(23.80 \div 0.7) \times 0.2</math></p>
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3	(a) (i)	$x \geq 100$ final answer	1	with no errors seen but isw substitution of values after correct inequality
	(ii)	$y \geq 120$ final answer	1	
	(iii)	$x + y \leq 300$ final answer	1	
	(iv)	$40x + 80y \geq 16000$ or $0.4x + 0.8y \geq 160$	M1	
	(b)	$x = 100$ ruled	B1	
		$y = 120$ ruled	B1	
		$x + y = 300$ ruled	B1	
		$x + 2y = 400$ ruled	B2	Allow B1 for line with negative gradient passing through (400, 0) or (0, 200) when extended
		Correct shading	B1	Dep on all previous marks earned Condone any clear indication of the required region
	(c)	200	2	M for $x = 100$ and $y = 200$ selected or for $x \times 0.4 + y \times 0.8$ oe evaluated where $(x, y)$ is an integer point in <i>their</i> [unshaded] region

