Source B for Question 2

W Limited makes two products: L and M. Until last year, all overhead costs were allocated on the basis of direct labour hours. The directors are now considering using activity based costing (ABC) for the coming year.

The management accountant has provided the following information for the coming year.

	Production and sales (units)	Labour hours per unit	Labour hourly rate	Direct materials cost per unit
			$	$
Product L	2000	3	16	32
Product M	6000	2	16	28

The breakdown of the annual overhead costs of $240 000 is as follows:

	$
Machine set-ups	60 000
Inspections	108 000
Order processing	72 000
Total overheads	240 000

Further information is also provided:

	Number of machine set-ups	Inspection hours	Number of purchase orders
Product L	100	150	30
Product M	60	100	34

The company wishes to achieve a mark-up of 30% for both products.

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2 Read Source B in the insert.

(a) State the steps taken if a manufacturing business wants to apply ABC.

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..... [4]

(b) Calculate, to **two** decimal places, the unit selling price for **each** product using the following costing methods to assign overhead costs:

(i) the existing method

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Workings:

[7]

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(ii) ABC.

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Workings:

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(c) Advise the directors whether or not they should use ABC for the coming year. Justify your answer.

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[Total: 25]

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<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th></tr>
<tr><td>2(a)</td><td>State the steps taken if a manufacturing business wants to apply ABC.

Split the overheads into cost pools. (1)
Identify the cost driver / activity. (1)
Calculate the cost per unit of the cost driver (cost pool / total number of cost driver). (1)
Allocate the cost to the product based on how much the product uses of the cost driver. (1)

Max 4

Accept other valid responses.</td><td>4</td></tr>
<tr><td>2(b)(i)</td><td>Calculate, to <u>two</u> decimal places, the unit selling price for <u>each</u> product using the following costing methods to assign overhead costs:

the existing method

<table>
<tr><th></th><th>Product L
$</th><th></th><th>Product M
$</th><th></th></tr>
<tr><td>Direct materials</td><td>64 000</td><td></td><td>168 000</td><td>(1)</td></tr>
<tr><td>Direct labour</td><td>96 000</td><td></td><td>192 000</td><td>(1)</td></tr>
<tr><td>Overhead costs W1</td><td>80 000</td><td>(1)</td><td>160 000</td><td>(1)</td></tr>
<tr><td>Total costs</td><td>240 000</td><td></td><td>520 000</td><td></td></tr>
<tr><td>Mark-up 30%</td><td>72 000</td><td></td><td>156 000</td><td>(1)OF</td></tr>
<tr><td>Total sales revenue</td><td>312 000</td><td></td><td>676 000</td><td></td></tr>
<tr><td>Unit selling price</td><td>156</td><td>(1)OF</td><td>112.67</td><td>(1)OF</td></tr>
</table>
W1
3 × 2 000 = 6 000 hours 2 × 6 000 = 12 000 hours
$240 000 × (6 000/18 000) = $80 000 $240 000 × (12 000/18 000) = $160 000</td><td>7</td></tr>
</table>

Question	Answer	Marks
2(b)(ii)	**Calculate, to <u>two</u> decimal places, the unit selling price for <u>each</u> product using the following costing methods to assign overhead costs:**	**7**

ABC

	$	$	
Direct materials	64 000	168 000	**}**
Direct labour	96 000	192 000	**}(1)OF**
Overhead costs **W1**	136 050	103 950	
Total costs	296 050	463 950	**(1)OF**
Mark-up 30%	88 815	139 185	**(1)OF**
Total sales revenue	384 865	603 135	
Unit selling price	192.43	100.52	**(1)OF**

W1

	Product L $		Product M $	
Machine set up cost	37 500	**}**	22 500	**}(1)**
Inspection cost	64 800	**}**	43 200	**}(1)**
Orders processing	33 750	**}**	38 250	**}(1)**
Total overhead costs	136 050		103 950	

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Question	Answer	Marks
2(c)	**Advise the directors whether or not they should use ABC for the coming year. Justify your answer.** ABC allocates overhead costs to the product more accurately. **(1)** The manufacturing cost for each product is more realistic because the cost allocated is based on the activity consumed by that product. **(1)** If ABC were used, Product L has a higher cost per unit ($148.03 vs $120) while Product M has a lower cost per unit ($77.33 vs $86.67). **(1)** The setting of selling price is more realistic. **(1)** If the same mark-up applies, W Limited can increase the selling price of Product L from $156 to $192.43 but has to reduce the selling price of Product M from $112.67 to $100.52. **(1)** It is time consuming / costly **(1)** as expertise is required **(1)** An extensive programme of training is required. **(1)** **Max 6 for comments** **Decision supported with a comment (1)** **Accept other valid responses**	**7**

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