

<p><b>5(a)</b></p>	<p><b>Award 1 mark each for calculation of material quantity, direct labour hours and machine hours, up to 3 marks.</b></p> <ul style="list-style-type: none"> <li>• Award 1 mark for calculating material quantity, e.g.  <math>\text{£}67\,800</math> (total material costs for A, B and C)  <math>\text{£}6.00</math> per kg (material cost per kg)  <math>= 11\,300</math> kg (12 000 kg available – therefore not limiting factor)</li> <li>• Award 1 mark for calculating direct labour hours, e.g.  <math>\text{£}30\,400</math> (total direct labour costs for A, B and C)  <math>\text{£}8.00</math> per hour (wage rate for direct labour)  <math>= 3\,800</math> direct labour hours (4 250 direct labour hours available – therefore not limiting factor)</li> <li>• Award 1 mark for calculating number of machine hours, e.g.            (Units sold for A x machine hours per unit) + (units sold for B x machine hours per unit) + (units sold for C x machine hours per unit)  <math>= (0.03 \times 2\,000) + (0.04 \times 5\,000) + (0.06 \times 3\,000) = 440</math></li> </ul> <p><b>Award 1 mark for recognising limiting factor, e.g.</b></p> <p>There are only 375 machine hours available and that this is the only limiting factor out of the three inputs.</p> <p>Accept any reasonable responses.</p>	<p><b>(4)</b></p>
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Question	Answer (AO2) 8, (AO4) 2	Mark																								
5(b)	<p><b>Award 1 mark each for calculating the variable costs, total contribution, contribution per unit and contribution per machine hour, up to 4 marks.</b></p> <ul style="list-style-type: none"> <li>Award 1 mark for calculating the variable costs for A, B and C, e.g.</li> </ul> <table border="1" data-bbox="411 488 1284 689"> <tr> <td>A</td> <td>£9 000 (material cost) + £4 000 (direct labour cost) + £2 100 (variable overheads) = £15 100</td> </tr> <tr> <td>B</td> <td>£50 250</td> </tr> <tr> <td>C</td> <td>£41 200</td> </tr> </table> <ul style="list-style-type: none"> <li>Award 1 mark for calculating the total contribution for A, B and C, e.g.</li> </ul> <table border="1" data-bbox="411 824 1284 1008"> <tr> <td>A</td> <td>£27 900 (revenue) - £15 100 (variable costs) = 12 800 (apply of rule)</td> </tr> <tr> <td>B</td> <td>£29 500 (apply of rule)</td> </tr> <tr> <td>C</td> <td>£18 650 (apply of rule)</td> </tr> </table> <ul style="list-style-type: none"> <li>Award 1 mark for contribution per unit for A, B and C</li> </ul> <table border="1" data-bbox="411 1108 1284 1288"> <tr> <td>A</td> <td>£12 800 (total contribution) / 2 000 (no. of units) = £6.40 (apply of rule)</td> </tr> <tr> <td>B</td> <td>£5.90 (apply of rule)</td> </tr> <tr> <td>C</td> <td>£6.22 (apply of rule)</td> </tr> </table> <ul style="list-style-type: none"> <li>Award 1 mark for contribution per machine hour for A, B and C</li> </ul> <table border="1" data-bbox="411 1422 1284 1601"> <tr> <td>A</td> <td>£6.40 (contribution per machine hour) / 0.03 (machine hours per unit) = £213.33 (accept 213) (apply of rule)</td> </tr> <tr> <td>B</td> <td>= £147.50 (accept 148) (apply of rule)</td> </tr> <tr> <td>C</td> <td>= £103.61 (accept 104) (apply of rule)</td> </tr> </table>	A	£9 000 (material cost) + £4 000 (direct labour cost) + £2 100 (variable overheads) = £15 100	B	£50 250	C	£41 200	A	£27 900 (revenue) - £15 100 (variable costs) = 12 800 (apply of rule)	B	£29 500 (apply of rule)	C	£18 650 (apply of rule)	A	£12 800 (total contribution) / 2 000 (no. of units) = £6.40 (apply of rule)	B	£5.90 (apply of rule)	C	£6.22 (apply of rule)	A	£6.40 (contribution per machine hour) / 0.03 (machine hours per unit) = £213.33 (accept 213) (apply of rule)	B	= £147.50 (accept 148) (apply of rule)	C	= £103.61 (accept 104) (apply of rule)	
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<b>5(b) cont'd</b>	<p><b>Award 1 mark for the ranking of each product.</b></p> <ul style="list-style-type: none"> <li>Award 1 mark for the correct ranking of the three products in terms of contribution per machine hour, e.g.</li> </ul> <table border="1" data-bbox="427 421 1300 640"> <thead> <tr> <th>Product</th> <th>Contribution per machine hour</th> <th>Ranking</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>£213.33/214</td> <td>1st</td> </tr> <tr> <td>B</td> <td>£147.50/148</td> <td>2nd</td> </tr> <tr> <td>C</td> <td>£103.61/104</td> <td>3rd</td> </tr> </tbody> </table> <p>Apply of rule.</p> <p><b>Award 1 mark each for calculating the number of machine hours for each product that would maximise profit, up to 3 marks.</b></p> <table border="1" data-bbox="427 869 1300 1200"> <thead> <tr> <th>Product</th> <th>Machine hours</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>2000 (no. of units) x 0.03 (machine hours per unit) = 60 machine hours (apply of rule) (1)</td> </tr> <tr> <td>B</td> <td>5000 units x 0.04 = 200 machine hours (apply of rule) (1)</td> </tr> <tr> <td>C</td> <td>375 (max machine hours) - (200 (Product A machine hours) + 60 (Product B machine hours) = 115 machine hours (apply of rule) (1)</td> </tr> </tbody> </table> <p><b>Award 1 mark for calculating the number of units for Product C.</b></p> <p>115 (machine hours) /0.06 (machine hours per unit) = 1916</p> <p><b>Award 1 mark for identifying the product mix that would maximise profit.</b></p> <table border="1" data-bbox="427 1559 1294 1700"> <thead> <tr> <th>Product</th> <th>No. of units</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>2000</td> </tr> <tr> <td>B</td> <td>5000</td> </tr> <tr> <td>C</td> <td>1916</td> </tr> </tbody> </table> <p>Accept any reasonable responses.</p>	Product	Contribution per machine hour	Ranking	A	£213.33/214	1st	B	£147.50/148	2nd	C	£103.61/104	3rd	Product	Machine hours	A	2000 (no. of units) x 0.03 (machine hours per unit) = 60 machine hours (apply of rule) (1)	B	5000 units x 0.04 = 200 machine hours (apply of rule) (1)	C	375 (max machine hours) - (200 (Product A machine hours) + 60 (Product B machine hours) = 115 machine hours (apply of rule) (1)	Product	No. of units	A	2000	B	5000	C	1916	<b>(10)</b>
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Question	Indicative content (A03) 4, (A04) 4, (A05) 4
5(c)	<p><b>Advantages:</b></p> <ul style="list-style-type: none"> <li>• It can enable the company to identify which activity makes the best or most profitable use of a limited resource and this will enable the company to maximise its contribution and profit</li> <li>• Use of contribution to judge an activity is better than a profit figure that might be distorted by fixed costs, some of which (like fixed overheads) might be arbitrarily apportioned. This will enable the company to make better decisions about product mix</li> <li>• Contribution per unit can lead to distortions if units of different products consume different amounts of scarce resources, so this will enable the company to identify which product really makes best use of the resource</li> </ul> <p><b>Disadvantages:</b></p> <ul style="list-style-type: none"> <li>• The figures being used might change – demand, selling price or costs might be greater or less than expected. This will mean that any decision made regarding product mix may no longer be the most profitable</li> <li>• The approach is highly dependent on the accuracy of the figures being used – demand, selling price or costs might be greater or less than expected. This may lead to the company producing less of the most profitable product</li> <li>• This approach fails to consider that customers may want the whole range of products and will stop buying all of them if one is withdrawn</li> <li>• This approach does not consider the possibility that the products are complementary and withdrawing/limiting one will render the others useless</li> <li>• This approach will need to be adapted if there are contractual obligations. The company may not be able to legally withdraw a product</li> <li>• This approach does not consider issues like multiple selling prices, which might make it difficult for the company to identify which product really is the most profitable</li> </ul> <p>Candidates should draw together/value their arguments to provide a reasoned judgement/decision.</p>

<b>Level</b>	<b>Mark</b>	<b>Descriptor</b>
	0	Question not attempted or response completely irrelevant or inaccurate
<b>Level 1</b>	1-3	Displays limited application of accounting theories or concepts in an appropriate context. A largely descriptive approach with unsupported or generalised examples, which are not related to the question scenario. Factors to support a logical chain of reasoning are not present or are not examined methodically. A supported conclusion is not present or the conclusion presented is not supported by evidence drawn from the question scenario.
<b>Level 2</b>	4-7	Displays application of accounting theories or concepts in an appropriate and relevant context. A largely descriptive approach with examples drawn from the question scenario. Factors to support a chain of reasoning are identified and supported by evidence drawn from the question scenario but are not examined methodically and the chain of reasoning presented is not sufficiently well developed or balanced to support a robust supported conclusion.
<b>Level 3</b>	8-12	Displays an understanding of accounting theories or concepts, which are applied in a relevant context. Displays the ability to link knowledge and understanding using relevant examples and inferences drawn from the question scenario. Displays an understanding of the essential themes present in the question scenario broken down into their constituent parts in order to present a logical and coherent chain of reasoning. Careful consideration is given to all relevant factors drawn from the question scenario with additional evidence drawn from relevant theory in order to present a reasoned and logically robust conclusion.