

# Management accounting activity based costing abc engineering essay

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## HND ACCOUNTINGMANAGEMENT ACCOUNTINGACTIVITY BASED COSTING

(ABC) Last year we used the absorption method to charge overheads to products using, for example, a labour hour rate or machine hour rate. This method was developed at a time when overheads were only a small fraction of the total cost of a product with materials and labour making up the largest proportion. Nowadays with industry using more technology, overheads have become a bigger proportion of total costs and this has resulted in increasing amounts of overheads being allocated to reducing numbers of machine or labour hours, giving questionable allocation of costs. Activity based costing is an alternative method to this and was developed in order to more accurately reflect the factors which cause overhead costs to arise. Overhead costs are attributed to products on the basis that it is activities that cause costs to arise. These activities might include, for example: \* Materials ordering\* Materials storage\* Setting up production runs\* Testing the quality of production\* Production scheduling Each activity can be identified with a cost driver e. g. the cost driver for materials ordering would be the number of orders placed, the cost driver for set-up costs would be the number of production runs etc. After the cost drivers have been identified then each cost driver's overheads are collected together. These collections of costs are called cost pools. Each pool is then divided by its driver, for example all overheads in the cost pool for the materials ordering process would be divided by the number of orders placed to give a value for the cost of placing an order. The costs of all activities relating to a product would be added together to give the overhead element of the cost of production. Because activity based costing shares out overheads using cost drivers compared

with the traditional costing systems which use departments, then a greater number of drivers can be used, reflecting all the different activities taking place in the manufacturing process. This leads to a fairer and more accurate way of charging overheads to the products. The traditional methods ignore the detail of many of the activities that actually take place. Introductory Exercise  
 Young plc manufactures two products, Simple and Complex, using the same equipment and similar processes. | Costs and other relevant information associated with these products for the upcoming budget period are detailed below:|

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Product	Product	Simple	Complex	Total	Sales & Production (units)
4,000	2,000	6,000			

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Product	Product	Simple	Complex	Total	Production runs in the period
3	2	25	55	80	Material Requisitions
20	35	55			kg per unit of product
2	4				

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Product	Product	Simple	Complex	Total	Direct labour rate per hour
£8	£8				

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Product	Product	Simple	Complex	Total	Material Cost per kg
£3	£3				

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The total budgeted indirect production costs are £240,000 | | |

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The business has started to use Activity Based Costing and has identified 2 basic activities| | which take place - materials handling and production set-ups.| |

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The Cost Drivers and Cost Pools associated with each of these activities are detailed below:| |

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Activity| Cost Driver Identified| Cost Pools | £| Materials Handling| Material requisitions| Materials handling cost pool| 100, 000| Production Set-up| Production Runs| Production set-up cost pool| 140, 000| Calculate the total cost of production for Simple and Complex based on a) Absorption costing using direct labour hours b) Activity based costing using suitable cost drivers

Question 1 Using Absorption Costing During August 2012 the company produces 3, 500 units each of product X and product Y. The total budgeted indirect production costs are £113, 000. Total budgeted direct labour hours for the month are 8, 750 Relevant Data for the two products are as follows:

Product X	Product Y
Direct labour hours per unit	11. 5

££

Direct Materials (per unit) 17. 5 12. 00 Direct Labour (per unit) 12. 00 18. 00

Using Activity Based Costing ABC involves the identification of key activities and their drivers. This firm has established 5 basic activities which take place:

- \* Machining
- \* Finishing
- \* Materials ordering
- \* Materials issue to production
- \* Scheduling, control and quality testing of production

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provided with the following information about each cost driver: Activity| Cost Driver| Total| Product X| Product Y| £| Machining| Machine hours| 3000| 2000| 1000| 45000| Finishing| Direct labour hours| 5000| 2000| 3000| 25000| Material ordering| No of orders placed| 25| 16| 9| 4000| Materials Handling| No of materials issues made| 75| 47| 28| 12000| Scheduling etc.| No of production runs| 36| 22| 14| 27000|

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||| | 113000| Calculate the total cost of production for Product X and Product Y based on c) Absorption costing based on direct labour hours d) Activity based costing

Question 2The Lomond Company operates an activity based costing system. The following costs and other data have been estimated for the coming period.

| £|

Power costs| 50, 000| Material Handling Costs| 80, 000| Customer Services Costs| 200, 000| Production Control Costs| 120, 000| Canteen Costs| 30, 000| Maintenance Costs| 40, 000| The following cost drivers have been identified with each of the above costs. Cost| Cost Driver| Power Costs| Machine hours| Material Handling Costs| Number of Stores requisitions| Customer Services Costs| Number of order requests| Production Control Costs| Number of batches| Canteen Costs| Number of luncheon vouchers| Maintenance Costs| Number of maintenance hours| The company produces two products called Morar and Nevis and other relevant data relating to the products are as follows:| Morar| Nevis| Production quantities (units)| 8, 000 units| 10, 000 units| Number of batches| 40 batches| 60 batches| Maintenance hours| 3,

000 hours| 2, 000 hours| Stores requisitions| 120 requisitions| 200 requisitions| Order requests| 850 orders| 1, 150 orders| Number of luncheon vouchers| 4, 500 vouchers| 7, 500 vouchers| Material cost per kg (£)| £2 per kg| £2 per kg| Kgs per unit of product| 4 kgs per unit| 6 kgs per unit| Labour rate per hour (£)| £8 per hour| £7 per hour| Labour hours per unit of product| 1 hour per unit| 2 hour per unit| Machine hours per unit of product| 4 hours per unit| 8 hours per unit| Calculate the cost per unit for Morar and Nevis based. a) On the absorption based costing system based on machine hoursb) On the activity based costing systemc) Prepare a report for your Manager accurately describing activity based costing and advising the Managing Director of the advantages of moving to such a method. Question 3The Delta Davis Company operates an activity based costing system. The following costs and other data have been estimated for the coming period.

| £|

Marketing Costs| 72, 000| Material Processing Costs| 25, 600| After Sales & Repairs| 18, 100| Production Control Costs| 95, 000| Maintenance Costs| 28, 000| Power costs| 136, 000| The company produces 2 products called Ace and Whisk and other relevant data relating to the products are as follows:  
 Ace| Whisk| Production quantities (units)| 7, 500 units| 12, 500 units| Number of batches| 10 batches| 20 batches| Maintenance hours| 1, 820 hours| 2, 310 hours| Stores requisitions| 25 requisitions| 30 requisitions| Customer orders | 650 orders| 750 orders| Number of after sales requests| 130 | 200 | Material cost per kg (£)| £3. 50 per kg| £3. 50 per kg| Kgs per unit of product| 7 kgs per unit| 4 kgs per unit| Labour rate per hour (£)| £10. 50 per hour| £11. 00 per hour| Labour hours per unit of product| 3 hour per unit| 6 hour per unit|

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Machine hours per unit of product| 5 hours per unit| 7 hours per unit|

Calculate the cost per unit for Ace and Whisk based. a) On the absorption based costing system based on labour hoursb) On the activity based costing systemc) Prepare a report for your Manager accurately describing activity based costing, giving justification for cost drivers chosen and advising the Managing Director of the advantages of moving to such a method.