SOLUTION 1

(a) (i) Actual Income Statement

			GHC
Sales Rev. 13500 @ 34			459,000
Cost of sales			
Opening stock (2,400 x 28.5)		68,400	
Production cost			
Direct materials b/d	4,000		
Purchases	189,000		
	193,000		
Less closing stock	3,200		
Direct labour cost		189,800	
Variable overheads		110,000	
Fixed overheads		44,480	
		54,000	
		466,680	
Less closing stock		79,800	
			386,880
Net profit			72,120

(ii) Calculation of Variances

(1) Sales margin price variance (Std Profit – Actual Profit) x AQ sold
(SP – AP) AQ
(7.5 – 5.5) 13,500 = 27,000 A

(2) SMW (AQ – BQ) SP
(13,500 – 12,000) 7.5 = 11,250 F

(3) DMPV (SP – AP) AQ
(4 – 4.5) 4,200 = 21,000 A

(4) DMUV (SQ – AQ) SP
(41,700 – 42,200) 4 = 2,000 A

(5) DLRV (SR – AR) A/H
(6 – 5) 22,000 = 22,000 F

(6) DLEV (SH – A/H) SR
(20,850 – 22,000) 6 = 6,900 A

(7) VOSU (SR – AR) AH
(44,000 – 44,480) = 480 A

(8) VOEV (SH – A/H) SR
(20,850 – 22,000)2 = 2,300 A

(9) FOV (BOH - AOH)
(62,550 – 54,000) = 8,550 F

(b) Reconciliation Statement

			GHC
Budgeted profit			90,000
Add fair Favourable Variance			
SMVV	11,250		
DLRV	22,000		
FOV	8,550		
		41,800	
Less Adverse Variance			
SMPV	27,000		
DMPV	21,000		
DMUV	2,000		
DLEV	6,900		
VOSU	480		
VOEV	2,300		
Actual profit		(59,680)	(17,880)
			72,120

SOLUTION 2

(a) Characteristics of Process Costing Systems

These are:

(i) Clearly defined process cost centres and the accumulation of all costs (material, labour and overheads) by the cost centres

(ii) The maintenance of accurate records of units and part units produced and the cost incurred by each process.

(iii) The averaging of the total costs of each process over the total production of that process, including partly completed units.

(iv) The charging of the cost of the output of one process as the raw materials input cost of the following process.

(v) Clearly defined procedures for separating costs where the process produces two or more products (i.e. joint products) or where by-products arise during production.

(b) (i) Calculation of effective units and cost per unit

Cost Element	Completed Units	+	Equivalent Units in Closing WIP	-	Equivalent Units in Opening WIP	=	Total Effective production	Cost GHC	Cost per Unit GHC
Input material	4,500	+	600	-	800	=	4,300	46,500	10.814
Material introduced	4,500	+	300	-	440	=	4,360	24,000	5.505
Labour	4,500	+	270	-	480	=	4,290	19,500	4.545
Overheads	4,500	+	240	-	360	=	4,380	18,200	4.155

Closing Stock Valuation (600 Units)

						GHC
Input Material	= 100%	complete	= 600	x GHC10.814	=	6,488
Material Introduced	= 50%	complete	= 300	x GHC5.505	=	1,651
Labour	= 45%	complete	= 270	x GHC4.545	=	1,227
Overheads	= 40%	complete	= 240	x GHC4.155	=	997
						10,363

(ii) Process 2 Account (FIFO Method)

	Units	GHC			Units	GHC
Opening WIP	800	19,400		Transfer to finished gods	4,500	117,237
Transfer from process 1	4,300	46,500		Closing WIP	600	10,363
Material introduced		24,000				
Labour		19,500				
Overheads		18,200				
	5,100	127,600			5,100	127,600

Goods Transferred (4500)

Cost b/f	19,400
DM 360 x 5.505 = 1,981.8 DL 320 x 4.545 = 1,454.4 O/H 440 x 4.155 = 1,828.2	5,266.7
Started and completed (3,700 x 25.019)	92,570.3
	117,237

SOLUTION 3

(a)

	Football	Cricket
	GHC	GHC
Selling price	65	100
Variable cost	(40)	50
Contribution per unit	25	50
Total contribution	1,000,000	1,500,000
Less Fixed production cost	(300,000)	(300,000)
Fixed sell cost	(225,000)	(675,000)
Profit	475,000	525,000

(b) (i) No of units = $\frac{\text{Fixed Cost + Profit}}{\text{Contribution per unit}}$

Football = $\frac{525{,}000 + 100{,}000}{25}$

= 25,000 Units

Cricket = $\frac{975{,}000 + 100{,}000}{50}$

= 21,500 Units

(ii) Price per Unit

Price = $\frac{\text{Fixed Cost + Profit + Variable Cost}}{\text{Volume}}$

Football = $\frac{525{,}000 + 100{,}000 + 1{,}600{,}000}{40{,}000 \text{ Units}}$

= GHC55.625

Cricket = $\frac{975{,}000 + 100{,}000 + 1{,}500{,}000}{30{,}000 \text{ Units}}$

= GHC85.83

(c) Quantitative Factors

The most critical factors are

(1) Price Per Unit
(2) Variable Cost Per Unit
(3) Sales Volume
(4) Sales Mix
(5) Relevant Range
(6) Fixed Costs

Qualitative Factors

(1) Competition
(2) Growth potential of each product
(3) Accuracy of estimates
(4) Possible expert sales

SOLUTION 4

(a) Stage 1: Identifying Activities:

Activities are composed of the aggregation of units of work or tasks and are described by verbs associated with tasks. For example, purchasing of materials might be identified as a separate activity.

Stage 2: Assigning costs to activity cost centres:

After the activities have been identified the cost of resources consumed over a specified period must be assigned to each activity. The aim is to determine how much the organization is spending on each of its activities.

Stage 3: Selecting appropriate cost drivers for assigning the cost of activities to cost objects:

In order to assign the costs attached to each activity cot centre to products, a cost driver must be selected for each activity centre.

Stage 4: Assigning the cost of the activities to products:

The final stag involves applying the cost driver rates to products. Therefore the cost driver must be measurable in a way that enables it to be identified with individual products.

(b) (i)

K. K. Ltd
Cash Budget for January, February & March

	Jan.	Feb.	March
	GHC	GHC	GHC
Receipts for sales	157,000	188,000	195,000
Insurance claim			5,000
Total Inflow	157,000	188,000	200,000
Payments			
Purchases	108,000	102,000	100,000
Wages	-	130,000	155,000
Electricity	2,000	2,000	2,000
Corporate Tax			100,000
Overheads	120,000	120,000	120,000
Total Outflow	230,000	354,000	477,000

Net Cash flow	(73,000)	(166,000)	(277,000)
Opening cash balance	-	(73,000)	(239,000)
Closing cash balance	(73,000)	(239,000)	(516,000)

(ii)

Demerits Subject of uncertainties

- Based on estimates and assumptions which are not always realistic.

SOLUTION 5

(a) Methods used to fix transfer prices

(i) Market Price: When the intermediate product can be sold on the open market the best transfer price will be the market price.

(ii) Adjusting Market Price: The market price can be adjusted to cater for externalities like transportation cost, selling and distribution cost.

(iii) Marginal Cost (where product can be sold in the market)
Where the product can be sold on the market but the Supplying Division has idle capacity the foods can be transferred at marginal cost

(iv) Where there is no market for the product.
The transfer price should be the marginal cost

(v) The marginal cost can also be adjusted to make provision for the fixed cost of the supply division this can be done through negotiations.

(b) (i) Return on Investment

	Tema	Kumasi
Profit after depreciation	330,000	490,000
Asset employed	1,600,000	1,900,000
ROI	20.63%	25.8%
Residual Income:		
Earnings	330,000	490,000
Less I C C	320,000	380,000
R.I.	10,000	110,000

Kumasi did better than Tema. They made a return far above the cost of capital and GHC100,000 more than Tema when Residual Income is used.

(ii) Return on Investment

	Tema	Kumasi
	330,000 + 40,000	490,000 – 60,000
	1,600,000 + 90,000	1,900,000 – 120,000
	370,000	430,000
	1,690,000	1,780,000
ROI =	21.9%	24.16%

Residual Income

Income	370,000	430,000
I C C	338,000	350,000
	32,000	74,000

Kumasi decision will adversely affect its performance both their ROI and RI will drop.

Tema division's performance will improve under both Return on Investment and Residual Income.