

WEEK 8_3_WS (PRE-TEST)_SOLUTIONS

SOLUTION QUESTION 1

a)

Process data:

One tonne of roofing sheets requires

1.1 tonnes of coiled strip which requires

1.1 tonnes of aluminium slab which requires

1.1/22% = 5 tonnes of bauxite ore

Stage	Purchase cost	Conversion cost	Total cost	Selling value	Added value	Value: Conv. Ratio (Added value/ conversion costs)
Mining (5 tonnes)	0	25 (5*5)	25	62 (5*12.40)	62	2.48
Refining (1.1 tonnes)	62	278 (1.1*252,5)	340	605 (1.1*550)	543	1.95
Rolling (1.1 tonnes)	605	165 (1.1*150)	770	968 (1.1*880)	363	2.2
Manufacture (1 tonne)	968	42,5	1010,5	1027	59	1.39
Building Supplies (1 tonne)	1027	29	1056	1078	51	1.76
					1078	

b)

-Ownership at various stages in the value chain

-State vs. private enterprises

- Involvement in stages where the value added is greater

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SOLUTION QUESTION 2

a)

<i>Customer Perspective:</i>		<i>2005</i>	<i>2006</i>	<i>2007</i>
Market Share	(8+52+15)/800	9.4%		
	(15+48+30)/1020		9.3%	
	(22+42+64)/1280			10%
Customer Growth	(542-386)/386		40.4%	
	(765-542)/542			41.1%
<i>Financial Perspective</i>		<i>2005</i>	<i>2006</i>	<i>2007</i>
Revenue Growth				
	(95-75)/75		26.7%	
	(128-95)/95			34.7%
Gross Profit	13.55/75	18.1%		
	16.5/95		17.4%	
	18.38/128			14.4%
Stock Turnover (cost of sales/average stock value)	61.45/5	12.3		
	78.5/6	times	13.1	
	109.62/14		times	7.8
				times
Net profit		5.81%	5.02%	2.69%
Overhead to sales		8.53%	7.68%	6.09%
<i>Workings for Financial Perspective</i>		<i>2005(£)</i>	<i>2006(£)</i>	<i>2007(£)</i>
Gross profit	(8*30%) + (52*20%) + (15*5%)	13.55		
	(15*30%) + (48*21%) + (32*6%)		16.5	
	(22*27%) + (42*22%) + (64*5%)			18.38
Revenue	8 + 52 + 15	75		
	15 + 48 + 32		95	
	22 + 42 + 64			128
Cost of sales*	75 - 13.55	61.45		
	95 - 16.5		78.5	
	128 - 18.38			109.62
Delivery costs	6.200*450	2.79		
	8.950 * 495		4.43	
	13.600 * 525			7.14
Overheads	Given	6.40	7.30	7.80
Net profit**	13.55 - 2.79 - 6.4	4.36		

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16.5 – 4.43 - 7.3	4.77
18.38 – 7.14 - 7.8	3.44

*Revenue – gross profit

**Gross profit – delivery costs - overheads

<i>Innovation and Learning Perspective</i>		<i>2005</i>	<i>2006</i>	<i>2007</i>
Employee growth	(340 – 299)/299		13.7%	
	(560-340)/340			65%
<i>Internal Business Perspective</i>		<i>2005</i>	<i>2006</i>	<i>2007</i>
Despatch performance	5.850/6200	94.4%		
	8.590/8.950		96%	
	11.560/13.600			85%
New product introduction rate	111/512	21.3%		
	201/572		35.1%	
	230/732			31.4%
Product obsolescence rate	100/512	19.5%		
	50/572		8.7%	
	20/732			2.7%
Garments per despatch	750.000/6.200	121		
	1.120.000/8.950		125	
	1.289.000/13.600			95
Value per despatch	£75m/6.200	£12.097		
	£95m/8.950		£10.615	
	£128m/13.600			£9.412
Returns per 1.000 garments despatched	2.100/750	2.8		
	3.260/1120		2.02	
	7.260/1.289			5.63

b)

- employee turnover and training,
- customer turnover/retention,
- customer complaints,
- return on investment