CHAPTER 13

RESPONSIBILITY ACCOUNTING, SUPPORT DEPARTMENT ALLOCATIONS, AND TRANSFER PRICING

26. a	 From HR to Fabricat From Admin. to Fab Total 	ting [(0.35 ÷ 0.80) × \$630,000] ricating [(0.50 ÷ 0.90) × \$450,000]	\$275,625 <u>250,000</u> <u>\$525,625</u>	
ł	 From HR to Finishin From Admin. to Fini Total 	ag [$(0.45 \div 0.80) \times $630,000$] ishing [$(0.40 \div 0.90) \times $450,000$]	\$354,375 <u>200,000</u> <u>\$554,375</u>	
27. (7. Checking: Administration (0.30 ÷ 0.80) × \$540,000 Human resources (0.30 ÷ 0.80) × \$360,000 Accounting (0.40 ÷ 0.80) × \$300,000 Direct costs 			
S	Savings: Administration (0.40 Human resources (0. Accounting (0.20 ÷ 0 Direct costs	0 ÷ 0.80) × \$540,000 20 ÷ 0.80) × \$360,000 0.80) × \$300,000	\$270,000 90,000 75,000 <u>337,500</u> <u>\$772,500</u>	
Ι	Loans: Administration (0.10 Human resources (0. Accounting (0.20 ÷ 0 Direct costs	\$ 67,500 135,000 75,000 <u>675,000</u> <u>\$952,500</u>		
28. A	Administration (\$540,00	0)		
	Human resources Accounting Checking Savings Loans	$(\$540,000 \times 0.10)$ $(\$540,000 \times 0.10)$ $(\$540,000 \times 0.30)$ $(\$540,000 \times 0.40)$ $(\$540,000 \times 0.10)$	\$ 54,000 54,000 162,000 216,000 <u>54,000</u> \$540,000	
I	Human resources (\$360.	000 + \$54,000 = \$414,000		
	Accounting Checking Savings Loans	$414,000 \times (0.10 \div 0.90)$ $414,000 \times (0.30 \div 0.90)$ $414,000 \times (0.20 \div 0.90)$ $414,000 \times (0.30 \div 0.90)$	\$ 46,000 138,000 92,000 <u>138,000</u> <u>\$414,000</u>	
I	Accounting (\$300,000 + Checking	\$54,000 + \$46,000 = \$400,000) $\$400,000 \times (0.40 \div 0.80)$ 359	\$200,000	
		UUU		

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Savings Loans		$400,000 \times (0.20 \div 0.80)$ $400,000 \times (0.20 \div 0.80)$	100,000 <u>100,000</u> <u>\$400,000</u>
Checking:	\$630,000 +	\$162,000 + \$138,000 + \$200,000 = \$1	,130,000
Savings:	\$337,500 +	\$216,000 + \$92,000 + \$100,000 = \$	745,500
Loans:	\$675,000 +	\$54,000 + \$138,000 + \$100,000 = \$	967,000
29. a. Human re	esources (\$3	$60,000)$ $(\$360,000 \times 0.10)$ $(\$360,000 \times 0.15)$ $(\$360,000 \times 0.40)$ $(\$360,000 \times 0.35)$ $,000 + \$36,000 = \$594,000)$ $\$594,000 \times (0.10 \div 0.90)$ $\$594,000 \times (0.50 \div 0.90)$ $\$594,000 \times (0.30 \div 0.90)$ $00 + \$54,000 + \$66,000 = \$290,000)$	\$ 36,000
Admin	histration		54,000
Mainte	enance		144,000
Assem	ibly		<u>126,000</u>
Finishi	ing		<u>\$ 360,000</u>
Administ	tration (\$558		\$ 66,000
Mai	ntenance		<u>330,000</u>
Asse	embly		<u>198,000</u>
Fini	shing		<u>\$594,000</u>
Maintena Asso Fini	embly \$2 shing \$2	50 + 534,000 + 566,000 = 5290,000) $90,000 \times (0.45 \div 0.80)$ $90,000 \times (0.35 \div 0.80)$	\$163,125 <u>126,875</u> <u>\$290,000</u>

b. Assembly:

 $(0.40 \times \$360,000) + [(0.5 \div 0.9) \times \$594,000] + [(0.45 \div 0.8) \times \$290,000] = \$144,000 + \$330,000 + \$163,125 = \underline{\$637,125}$

Finishing:

 $(0.35 \times \$360,000) + [(0.3 \div 0.9) \times \$594,000] + [(0.35 \div 0.8) \times \$290,000] =$ $\$126,000 + \$198,000 + \$126,875 = \underline{\$450,875}$

c. The cost allocation is affected by the order in which costs are assigned because the cost allocated from a particular service department depends on the amount of cost allocated to that service department from other service departments. The amount of costs allocated from other service departments depends on the benefits-provided ranking.

52.	Assets		# of		Hours of	
	Employed	<u>%</u>	Employees	<u>%</u>	Operation	<u>%</u>
Surgery	\$3,948,500	53	20	20	24,850	35
In-patient	2,458,500	33	36	36	28,400	40
Out-patient	1,043,000	14	44	44	17,750	25
-	\$7,450,000		100		71,000	

Administration costs:

Surgery: \$5,400,000 × 0.53 = \$2,862,000 In-patient: \$5,400,000 × 0.33 = \$1,782,000 Out-patient: \$5,400,000 × 0.14 = \$756,000

P	ablic relations cost: Surgery: $$1,100,000 \times 0.20 = $220,000$ In-patient: $$1,100,000 \times 0.36 = $396,000$ Out-patient: $$1,100,000 \times 0.44 = $484,000$						
M	faintenance and janitorial cost: Surgery: $$1,700,000 \times 0.35 = $595,000$ In-patient: $$1,700,000 \times 0.40 = $680,000$ Out-patient: $$1,700,000 \times 0.25 = $425,000$						
A Pu M Te	dministration ublic Relations laintenance otal	<u>Surgery</u> \$2,862,000 220,000 <u>595,000</u> <u>\$3,677,000</u>	<u>In-Patient</u> \$1,782,000 <u>396,000</u> <u>680,000</u> <u>\$2,858,000</u>	<u>Out-Patient</u> \$ 756,000 484,000 <u>425,000</u> <u>\$1,665,000</u>			
53. a.	Administration: $45 + 2$ Commercial = $45 \div 27$ Residential = $210 \div 27$ Property Mgmt. = $18 \div$	10 + 18 = 273 3 = 16%; 0.16 × 3 = 77%; 0.77 × • 273 = 7%; 0.07	\$1,500,000 = \$ \$1,500,000 = \$ × \$1,500,000 =	240,000 1,155,000 \$105,000			
	Accounting = $900,000 + 1,440,000 + 540,000 = 2,880,000$ Commercial = $900,000 \div 2,880,000 = 31\%$; $0.31 \times 990,000 = 306,900$ Residential = $1,440,000 \div 2,880,000 = 50\%$; $0.50 \times 990,000 = 495,000$ Property Mgmt. = $540,000 \div 2,880,000 = 19\%$; $0.19 \times 990,000 = 188,100$						
	Promotion: $10,000,000 + 18,000,000 + 2,000,000 = 30,000,000$ Commercial = $10,000,000 \div 30,000,000 = 33\%$; $0.33 \times 720,000 = 237,600$ Residential = $18,000,000 \div 30,000,000 = 60\%$; $0.60 \times 720,000 = 432,000$ Property Mgmt. = $2,000,000 \div 30,000,000 = 7\%$; $0.07 \times 720,000 = 50,400$						
b.	Revenue Direct costs Allocated costs: Administration Accounting Promotion Operating income	$\begin{array}{c} \underline{\text{Comm.}} \\ \$ \ 10,000,000 \\ (10,490,000) \\ \hline (240,000) \\ (306,900) \\ \hline (237,600) \\ \underline{\$ \ (1,274,500)} \end{array}$	$\frac{\text{Res.}}{\$18,000,000}$ (9,179,000) (1,155,000) (495,000) (432,000) $\frac{(432,000)}{\$-6,739,000}$	Prop. Mgmt. \$2,000,000 (398,400) (105,000) (188,100) (50,400) \$1,258,100			
54. a	Administration costs (Accounting Promotion Commercial Residential Property Mgmt. Total (rounded)	B1,500,000) $Ba \\ 15 \\ 12 \\ 45 \\ 210 \\ 18 \\ 18 \\ 18 \\ 18 \\ 18 \\ 18 \\ 18 \\ $	ase ÷ 300 ÷ 300 ÷ 300 ÷ 300 ÷ 300	Allocation \$ 75,000 60,000 225,000 1,050,000 <u>90,000</u> \$1,500,000			

Accounting costs (\$990,000 + \$75,000 = \$1,065,000) <u>Base</u>

Allocation

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on

Promotion	\$720,000 ÷ \$3,600,000	\$ 213,000				
Commercial	\$900,000 ÷ \$3,600,000	266,250				
Residential	\$1,440,000 ÷ \$3,600,000	426,000				
Property Mgmt.	\$540,000 ÷ \$3,600,000	159,750				
Total (rounded)		<u>\$1,065,000</u>				
Promotion ($$720,000 + $60,000 + $213,000 = $993,000$)						
	Base	Allocation				
Commercial	\$10,000,000 ÷ \$30,000,000	\$331,000				
Residential	\$18,000,000 ÷ \$30,000,000	595,800				
Property Mgmt.	\$2,000,000 ÷ \$30,000,000	66,200				
		<u>\$993,000</u>				

Summary of allocations: Commercial: \$225,000 + \$266,250 + \$331,000 = \$822,250 Residential: \$1,050,000 + \$426,000 + \$595,800 = \$2,071,800 Property Mgmt.: \$90,000 + \$159,750 + \$66,200 = \$315,950

b.		<u>Commercial</u>	<u>Residential</u>	Property Mgmt.
	Revenues	\$ 10,000,000	\$18,000,000	\$2,000,000
	Direct costs	(10,490,000)	(9,179,000)	(398,400)
	Indirect costs	(822,250)	(2,071,800)	(315,950)
	Income	<u>\$ (1,312,250</u>)	<u>\$ 6,749,200</u>	<u>\$1,285,650</u>
	The Property Ma	nagement Departme	ent is the most pro	ofitable with a return

revenues of 64.3 percent.

55. a. Personnel: 72 + 48 = 120

Residential = $72 \div 120 = 60\%$; $0.60 \times $140,000 = $84,000$ Commercial = $48 \div 120 = 40\%$; $0.40 \times $140,000 = $56,000$

Administration: 480,000 + 800,000 = 1,280,000Residential = $480,000 \div 1,280,000 = 37.5\%$; $0.375 \times 180,000 = 67,500$ Commercial = $800,000 \div 1,280,000 = 62.5\%$; $0.625 \times 180,000 = 112,500$

Total support costs allocated to Residential = \$4,000 + \$67,500 = \$151,500Total support costs allocated to Commercial = \$56,000 + \$112,500 = \$168,500

b.	<u> # of Empl.</u>	<u>%</u>	Direct Costs	<u>%</u>
Administration	30	20%		
Residential	72	48%	\$480,000	37.5%
Commercial	48	32%	800,000	62.5%
	150			

Personnel = \$140,000 of costsAdministration = $0.20 \times $140,000 = $28,000$ Residential = $0.48 \times $140,000 = $67,200$ Commercial = $0.32 \times $140,000 = $44,800$

Administration = \$180,000 + \$28,000 = \$208,000 of costs Residential = 0.375 × \$208,000 = \$78,000 Commercial = 0.625 × \$208,000 = \$130,000

Total support costs allocated to Residential = 67,200 + 78,000 = 145,200

Total support costs allocated to Commercial = 44,800 + 130,000 = 174,800

c. (1) Direct Method

Residential = 480,000 + 151,500 = 631,500; $631,500 \div 60,000 = 10.53$ Commercial = 800,000 + 168,500 = 968,500; $968,500 \div 570,000 = 1.70$

(2) Step Method

Residential = $480,000 + 145,200 = 625,200; 625,200 \div 60,000 = 10.42$ Commercial = $800,000 + 174,800 = 974,800; 974,800 \div 570,000 = 1.71$