SOLUTIONS TO PROBLEMS

PROBLEM 2-1A

(a) $840,000 ÷ $700,000 direct labor costs = 120% of direct labor costs

(b) See solution to part (e) for job cost sheets

(c)	Raw Materials Inventory	90,000	
	Accounts Payable		90,000
	Factory Labor	70,000	
	Factory Wages Payable		54,000
	Employer Payroll Taxes Payable		16,000
	Manufacturing Overhead	65,000	
	Accounts Payable		16,000
	Accumulated Depreciation—Equipment		12,000
	Raw Materials Inventory		17,000
	Factory Labor		20,000
(d)	Work in Process Inventory	79,000	
	Raw Materials Inventory ($10,000 + $39,000 + $30,000)		79,000
	Work in Process Inventory	50,000	
	Factory Labor ($5,000 + $25,000 + $20,000)		50,000
	Work in Process Inventory	60,000	
	Manufacturing Overhead ($50,000 X 120% of direct labor costs)		60,000

See solution to part (e) for postings to job cost sheets.

PROBLEM 2-1A (Continued)

(b)&(e) Job Cost Sheets

Job No. 50

Date	Direct Materials	Direct Labor	Manufacturing Overhead
Beg.	$20,000	$12,000	$16,000
Jan.	10,000	5,000	6,000*
	$30,000	$17,000	$22,000

Cost of completed job	
Direct materials	$30,000
Direct labor	17,000
Manufacturing overhead	22,000
Total cost	$69,000

*$5,000 X 120%

Job No. 51

Date	Direct Materials	Direct Labor	Manufacturing Overhead
Jan.	$39,000	$25,000	$30,000**
	$39,000	$25,000	$30,000

Cost of completed job	
Direct materials	$39,000
Direct labor	25,000
Manufacturing overhead	30,000
Total cost	$94,000

**$25,000 X 120%

Job No. 52

Date	Direct Materials	Direct Labor	Manufacturing Overhead
Jan.	$30,000	$20,000	$24,000***

***$20,000 X 120%

	Finished Goods Inventory	163,000	
	Work in Process Inventory ($69,000 + $94,000)		163,000
(f)	Accounts Receivable	280,000	
	Sales Revenue ($122,000 + $158,000)		280,000
	Cost of Goods Sold	159,000	
	Finished Goods Inventory ($90,000 + $69,000)		159,000

(g)

Finished Goods Inventory			
Beginning balance	90,000	159,000	Cost of jobs 49 and 50 sold
Cost of completed jobs 50 and 51	163,000		
Ending balance	94,000		

The balance in this account consists of the cost of completed Job No. 51 which has not yet been sold.

(h)

Manufacturing Overhead	
Actual	Applied
65,000	60,000
5,000	

The balance in the Manufacturing Overhead account is underapplied.

PROBLEM 2-2A

(a)

Work in Process Inventory

1/1	Balance (1)	128,400	Completed work (5) (c)	386,200
	Direct materials (2)	131,000		
	Direct labor (3)	139,000		
	Manufacturing overhead (4)	166,800		
12/31	Balance	179,000		

(1)

Job 7640	$ 77,800
Job 7641	50,600
	$128,400

(2)

Job 7640	$ 30,000
Job 7641	43,000
Job 7642	58,000
	$131,000

(3)

Job 7640	$ 36,000
Job 7641	48,000
Job 7642	55,000
	$139,000

(4)

Job 7640	$ 43,200
Job 7641	57,600
Job 7642	66,000
	$166,800

(5) (a) Job 7640

Beginning balance	$ 77,800
Direct materials	30,000
Direct labor	36,000
Manufacturing overhead	43,200
	$187,000

(b) Job 7641

Beginning balance	$ 50,600
Direct materials	43,000
Direct labor	48,000
Manufacturing overhead	57,600
	$199,200

(c) Total cost of completed work

Job 7640	$187,000
Job 7641	199,200
	$386,200

PROBLEM 2-2A (Continued)

Work in process balance		$179,000
Unfinished job No. 7642		$179,000 (a)

(a) Current year's cost

Direct materials	$ 58,000
Direct labor	55,000
Manufacturing overhead	66,000
	$179,000

(b) Actual overhead costs

Incurred on account	$120,000
Indirect materials	14,000
Indirect labor	18,000
Depreciation	8,000
	$160,000

Applied overhead costs

Job 7640	$ 43,200
Job 7641	57,600
Job 7642	66,000
	$166,800

Actual overhead	$160,000
Applied overhead	166,800
Overapplied overhead	$ 6,800

Manufacturing Overhead	6,800	
Cost of Goods Sold		6,800

(c)

Sales revenue (given)		$530,000
Cost of goods sold		
Add: Job 7638	$ 87,000	
Job 7639	92,000	
Job 7641	199,200	
	378,200	
Less: Overapplied overhead	6,800	371,400
Gross profit		$158,600

PROBLEM 2-3A

(a)

(1)	Raw Materials Inventory	4,900	
	Accounts Payable		4,900
	Factory Labor	4,800	
	Cash		4,800
	Manufacturing Overhead	1,300	
	Accumulated Depreciation—Equipment		900
	Accounts Payable		400
(2)	Work in Process Inventory	4,900	
	Manufacturing Overhead	1,500	
	Raw Materials Inventory		6,400
	Work in Process Inventory	3,600	
	Manufacturing Overhead	1,200	
	Factory Labor		4,800
	Work in Process Inventory ($3,600 X 1.25)	4,500	
	Manufacturing Overhead		4,500
(3)	Finished Goods Inventory	14,740	
	Work in Process Inventory		14,740

Job	Direct Materials	Direct Labor	Manufacturing Overhead*	Total Costs
Rogers	$1,700	$1,560	$1,950	$ 5,210
Stevens	1,300	900	1,125	3,325
Linton	2,200	1,780	2,225	6,205
				$14,740

*125% X direct labor amount

	Cash	18,900	
	Sales revenue		18,900
	Cost of Goods Sold	14,740	
	Finished Goods Inventory		14,740

PROBLEM 2-3A (Continued)

(b)

Work in Process Inventory					
6/1	Balance	5,540	June	Completed work	14,740
	Direct materials	4,900			
	Direct labor	3,600			
	Overhead applied	4,500			
6/30	Balance	3,800			

(c) Work in Process Inventory $3,800

Job: Koss (Direct materials $2,000 + Direct labor $800 + Manufacturing overhead $1,000) $3,800

(d)

CASE INC.
Cost of Goods Manufactured Schedule
For the Month Ended June 30, 2017

Work in process, June 1		$ 5,540
Direct materials used	$4,900	
Direct labor	3,600	
Manufacturing overhead applied	4,500	
Total manufacturing costs		13,000
Total cost of work in process		18,540
Less: Work in process, June 30		3,800
Cost of goods manufactured		$14,740

PROBLEM 2-4A

(a) Department D: $1,200,000 ÷ $1,500,000 = 80% of direct labor cost.
Department E: $1,500,000 ÷ 125,000 = $12.00 per direct labor hour.
Department K: $900,000 ÷ 120,000 = $7.50 per machine hour.

(b)

	Department		
Manufacturing Costs	D	E	K
Direct materials	$140,000	$126,000	$ 78,000
Direct labor	120,000	110,000	37,500
Overhead applied	96,000*	132,000**	78,000***
Total	$356,000	$368,000	$193,500

*$120,000 X 80%
**11,000 X $12.00
***10,400 X $7.50

(c)

	Department		
Manufacturing Overhead	D	E	K
Incurred	$99,000	$124,000	$79,000
Applied	96,000	132,000	78,000
Under (over) applied	$ 3,000	$ (8,000)	$ 1,000

PROBLEM 2-5A

(a) $7,600 ($16,850 + $7,975 – $17,225).

(b) $36,000 [$9,750 + $15,000 + (75% X $15,000)]. (Given in other data).

(c) $13,950 ($16,850 – $2,900).

(d) $6,300 ($8,400 X 75%).

(e) $12,200 [Given in other data—$3,800 + $4,800 + (75% X $4,800)].

(f) $52,450 ($36,000 + $13,950 + $8,400 + $6,300 – $12,200).

(g) $5,000 (Given in other data).

(h) $52,450 (See (f) above).

(i) $53,450 ($5,000 + $52,450 – $4,000).

(j) $4,000 (Given in other data).

(k) $12,025 (Equal to factory labor incurred).

(l) $3,625 ($12,025 – $8,400).

(m) $6,300 ($7,770* – $1,470) or (Same as (d)).

*$2,900 + $3,625 + $1,245