

Exercise E20-1
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<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
(a)	Factory Labor	72,000	
	Factory Wages Payable		60,000
	Employer Payroll Taxes Payable		8,000
	Employer Fringe Benefits Payable		4,000
(b)	Work in Process Inventory	61,200	
	Manufacturing Overhead	10,800	
	Factory Labor		72,000

Exercise E20-2

page 895

(a)

<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
5/31	Work in Process (Inventory)	10,400	
	Manufacturing Overhead	800	
	Raw Materials (Inventory)		11,200
31	Work in Process (Inventory)	12,500	
	Manufacturing Overhead	1,200	
	Factory Labor		13,700
31	Work in Process (Inventory)	10,000	
	Manufacturing Overhead		10,000

Job 429

<u>Beg Bal</u>	<u>Materials</u>	<u>Labor</u>	<u>Overhead</u>	<u>Total</u>
2,000	2,500	1,900	1,520	<u>7,920</u>

<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
31	Finished Goods (Inventory)	7,920	
	Work in Process (Inv)		7,920

Exercise E20-2
(continued)

Work in Process (Inventory)

Beg Bal	3,200		FG	7,920
DM	10,400			
DL	12,500			
MO	<u>10,000</u>			
	36,100			
 B = 28,180				

Subsidiary Ledger of Job Cost Sheets

Job	Beg Bal	Materials	Labor	Overhead	Total
430	1,200	3,500	3,000	2,400	10,100
431		4,400	7,600	6,080	<u>18,080</u>
					<u>28,180</u>

Exercise E20-5 – page 896

(a)
$$\frac{\text{est. MO for year}}{\text{est. activity for year}} = \text{MO rate}$$

$$\frac{\$305,000}{125,000 \text{ hrs.}} = \$2.44 \text{ per hour}$$

Make the entry to apply overhead to production for January when actual costs were \$28,000 and 11,750 machine hours were used.

Date	Account Titles	Debit	Credit
31	Work in Process (Inventory)	28,670	
	Manufacturing Overhead		28,670

(b) **Manufacturing Overhead**

<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Actual</td> <td style="text-align: right;">28,000</td> </tr> </table>	Actual	28,000	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Applied</td> <td style="text-align: right;">28,670</td> </tr> <tr> <td colspan="2" style="padding-top: 20px;"> 1/31 Bal = 670 overapplied Bal Sheet as Unearned Revenue </td> </tr> </table>	Applied	28,670	1/31 Bal = 670 overapplied Bal Sheet as Unearned Revenue	
Actual	28,000						
Applied	28,670						
1/31 Bal = 670 overapplied Bal Sheet as Unearned Revenue							

(c) **Manufacturing Overhead**

<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Jan - Dec</td> <td style="text-align: right;">322,000</td> </tr> </table>	Jan - Dec	322,000	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Applied</td> <td style="text-align: right;">317,200</td> </tr> <tr> <td colspan="2" style="padding-top: 20px;"> 12/31 Bal = 4,800 underapplied </td> </tr> </table>	Applied	317,200	12/31 Bal = 4,800 underapplied	
Jan - Dec	322,000						
Applied	317,200						
12/31 Bal = 4,800 underapplied							

Date	Account Titles	Debit	Credit
(d)	Cost of Goods Sold	4,800	
	Manufacturing Overhead		4,800

Exercise E20-6
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(a) (1) Source documents for

Materials = materials requisition slips
Labor = time tickets
Overhead = predetermined rate

(2) at beginning of year would be:

$\frac{\text{est. MO for year}}{\text{est. activity for year}} = \text{MO rate}$

but “after the fact”

$\frac{\text{M O}}{\text{D L}} = \frac{550}{440}$ and $\frac{475}{380}$ and $\frac{675}{540} = 125\%$

Exercise E20-6 (continued)

(3)

<u>Date</u>	<u>Materials</u>	<u>Labor</u>	<u>Overhead</u>
7/10	825		
12	900		
15		440	550
22		380	475
24	1,600		
27	1,500		
31		540	675
	<u>4,825</u>	<u>1,360</u>	<u>1,700</u>

Total Cost = \$7,885

Unit Cost = $\frac{7,885}{2,000} = \$3.94$

<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
(d)	Finished Goods (Inventory)	7,885	
	Work in Process (Invntry)		7,885

Exercise E20-7
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<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
1.	Raw Materials (Inventory)	46,300	
	Accounts Payable		46,300
2.	Work in Process (Inventory)	29,200	
	Manufacturing Overhead	6,800	
	Raw Materials (Inventory)		36,000
3.	Factory Labor	53,900	
	Employer Payroll Tax Pay		4,900
	Wages Payable		49,000
4.	Work in Process (Inventory)	48,000	
	Manufacturing Overhead	5,900	
	Factory Labor		53,900
5.	Manufacturing Overhead	80,500	
	Accounts Payable		80,500

Exercise E20-7 (continued)

Date	Account Titles	Debit	Credit
6.	Work in Process (Inventory)	72,000	
	Manufacturing Overhead		72,000
7.	Finished Goods (Inventory)	88,000	
	Work in Process (Inventory)		88,000
8.	Accounts Receivable	103,000	
	Sales		103,000
	Cost of Goods Sold	75,000	
	Finished Goods (Inventory)		75,000

Determine the balance of Manufacturing Overhead and state whether it is under or overapplied.

Manufacturing Overhead

<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">2.</td> <td style="width: 40%;">IM</td> <td style="width: 10%; text-align: right;">6,800</td> </tr> <tr> <td>4.</td> <td>IL</td> <td style="text-align: right;">5,900</td> </tr> <tr> <td>5.</td> <td>O</td> <td style="text-align: right;">80,500</td> </tr> <tr> <td colspan="2">Bal =</td> <td style="text-align: right;">21,200 (under)</td> </tr> </table>	2.	IM	6,800	4.	IL	5,900	5.	O	80,500	Bal =		21,200 (under)		<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">6.</td> <td style="width: 40%;">Applied</td> <td style="width: 10%; text-align: right;">72,000</td> </tr> </table>	6.	Applied	72,000
2.	IM	6,800															
4.	IL	5,900															
5.	O	80,500															
Bal =		21,200 (under)															
6.	Applied	72,000															

Exercise E20-8
page 897

<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
1.	Raw Materials (Inventory)	192,000	
	Accounts Payable		192,000
	Factory Labor	87,300	
	Wages Payable		87,300
2.	Work in Process (Inventory)	153,530	
	Manufacturing Overhead	4,470	
	Raw Materials (Inventory)		158,000
	Work in Process (Inventory)	80,000	
	Manufacturing Overhead	7,300	
	Factory Labor		87,300
3.	Manufacturing Overhead	39,500	
	Accounts Payable		39,500

Exercise E20-8 (continued)

<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
4.	Manufacturing Overhead	14,550	
	Accumulated Depreciation		14,550
5.	Work in Process (Inventory)	64,000	
	Manufacturing Overhead		64,000

<u>Job</u>	<u>Materials</u>	<u>Labor</u>	<u>Overhead</u>	<u>Total</u>
A20	35,240	18,000	14,400	67,640
A21	42,920	22,000	17,600	82,520
A23	39,270	25,000	20,000	<u>84,270</u>
				<u>234,430</u>

<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
6.	Finished Goods (Inventory)	234,430	
	Work in Process (Invntry)		234,430

Brief Exercise BE20-2 – page 894

<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
	Raw Materials (Inventory)	4,000	
	Accounts Payable		4,000
	Factory Labor	5,000	
	Factory Wages Payable		4,200
	Employer Payroll Tax Pay		800
	Manufacturing Overhead	2,000	
	Utilities Payable		2,000

Brief Exercise BE20-3 – page 894

<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
	Work in Process (Inventory)	2,800	
	Manufacturing Overhead	600	
	Raw Materials (Inventory)		3,400

Brief Exercise BE20-4 – page 894

<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
	Work in Process (Inventory)	4,200	
	Manufacturing Overhead	800	
	Factory Labor		5,000

Brief Exercise BE20-6

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$$\frac{\text{est. MO for year}}{\text{est. activity for year}} = \text{MO rate}$$

Based on direct labor cost:

$$\frac{\$800,000}{\$500,000} = 160\%$$

Based on direct labor hours:

$$\frac{\$800,000}{50,000 \text{ hrs.}} = \$16 \text{ per hour}$$

Based on machine hours:

$$\frac{\$800,000}{100,000 \text{ hrs.}} = \$8 \text{ per hour}$$

The journal entry to apply overhead costs to production is:

<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
	Work in Process (Inventory)	est	
	Manufacturing Overhead		est

Brief Exercise BE20-7

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<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
1/31	Work in Process (Inventory)	36,000	
	Manufacturing Overhead		36,000
2/28	Work in Process (Inventory)	27,000	
	Manufacturing Overhead		27,000
3/31	Work in Process (Inventory)	45,000	
	Manufacturing Overhead		45,000

Brief Exercise BE20-8 – page 894

<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
3/31	Finished Goods (Inventory)	55,000	
	Work in Process (Inventory)		55,000
31	Cash	35,000	
	Sales		35,000
31	Cost of Goods Sold	25,000	
	Finished Goods (Inventory)		25,000

Brief Exercise BE20-9

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Lott Company

Debit balance = underapplied

Interim Statements = Prepaid Expense on B.S.

Annual Statements = not shown separately

Perez Company

Credit balance = overapplied

Interim Statements = Unearned Revenue on B.S.

Annual Statements = not shown separately