

Operating Budgets: Planning

- Budgeting Overview & Process
- Mechanics of Budgeting

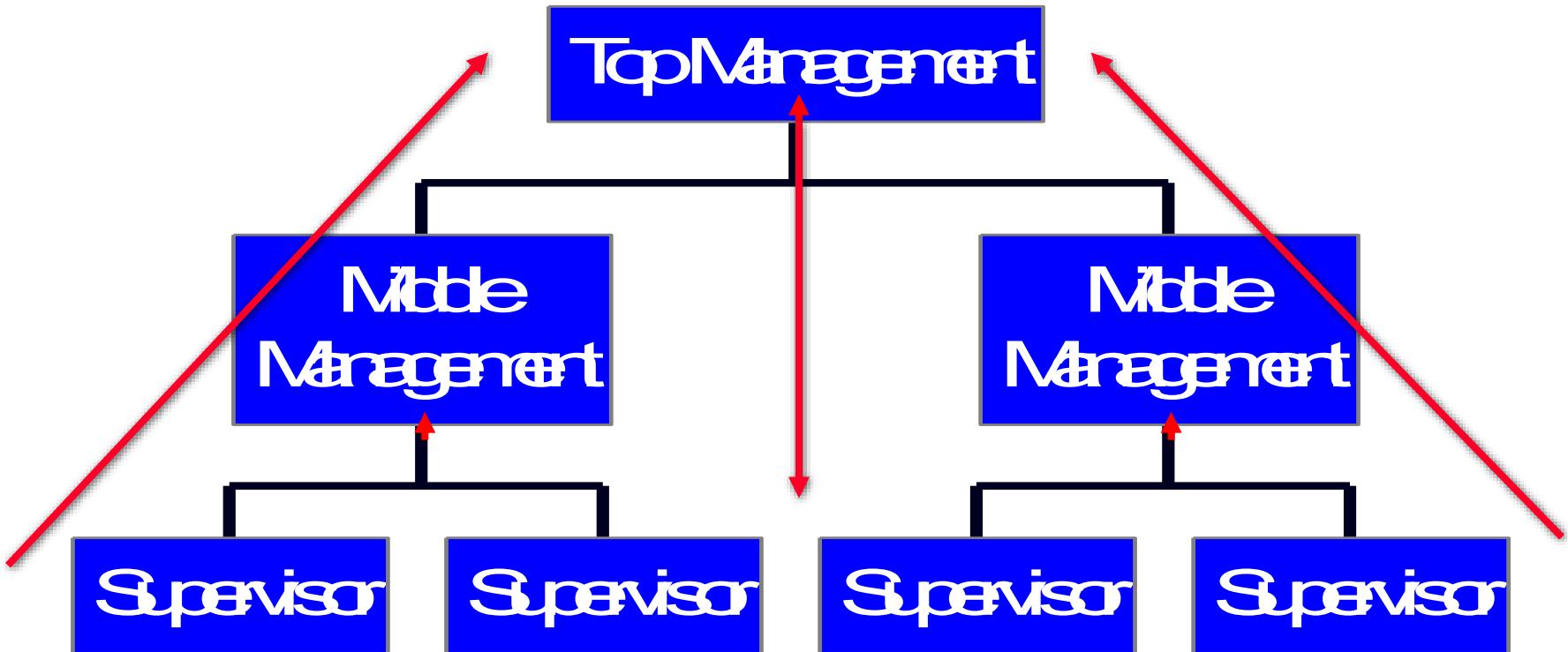
Definition

- A **budget** is the quantification of a strategic plan of action
 - Works with a set of assumptions...
 - Quantifies targets...
 - For a specific period

Roles for Budgets

- **Planning**
 - Links Strategy with Operational activities
- **Coordination**
 - Aligns decentralized efforts (often with compensation tied to budget performance)
- **Performance evaluation & feedback**
 - Facilitates evaluation of previous performance for the intent of *improving the future*

Participative Budgeting



A participative or self-imposed budget is a budget that is prepared with the full cooperation and participation of managers at all levels. Top Management approves once it *meets stakeholders' expectations*

Process: Recursive Nature

- **Budgets are rarely linear**
 - Each step goes through revisions
 - Entire cycles get iterated
- **Benefit comes from**
 - Intense examination of targets
 - Challenging assumptions
 - Examining alternatives & making choices

Past Performance

- Many firms use the previous period as the base line
- Advantages
 - Reflects operations “on the ground”
 - Budgeting becomes easy (only marginal changes)
- Disadvantages
 - Encourages game playing (“ratcheting effects”)
 - Stifles innovation... a “zero-based” budget allows out-of-the-box thinking
 - Miss the forest for the trees

Choosing the Budget Period

Operating Budget



The budget period should match the time horizon over which managers can **enact meaningful change**. Operating budgets often cover a one-year (and quarterly sub-periods) period corresponding to a company's fiscal year.

A continuous budget is a 12-month budget that rolls forward one month (or quarter) as the current month (or quarter) is completed.

Role of Discretion in Budgets

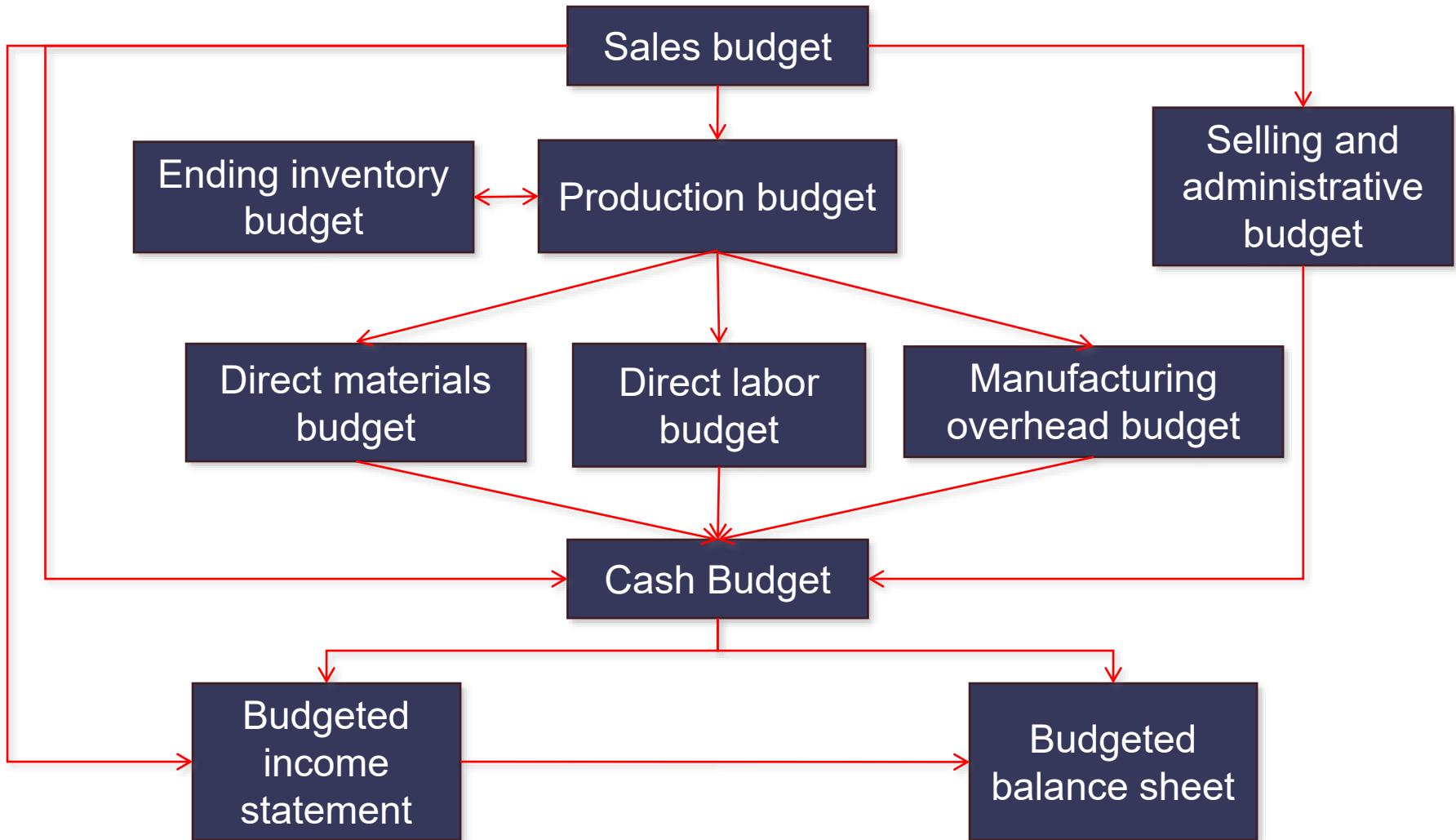
- **Budgetary Slack**

- “Padding” the budget to ensure there are enough resources
 - Managers are risk-averse, so they include budgetary slack to cover unknown issues, an “Uncertainty Premium”
 - Shareholders are risk-neutral, so they don’t require an “Uncertainty Premium”
- **Malfeasance**: Expropriation of Resources for the managers’ Personal Benefit
 - Always unethical!!!

- **Responsibility Accounting**

- Only include budget line items that are *controllable*
- You can’t fire Jacques Nasser!!! (Ford CEO in the 1990s)

The Master Budget: An Overview



Master Budget Sub-schedules

1. Sales budget, including a schedule of expected cash collections
2. Production budget
3. Direct materials budget, including a schedule of expected cash disbursements for purchases of materials
4. Direct labor budget
5. Manufacturing overhead budget
6. Selling and administrative expense budget
7. Cash budget
8. Budgeted income statement
9. Budgeted balance sheet

Budgeting Example

① Royal Company is preparing budgets for the quarter ending June 30th.

② Budgeted sales for the next five months are:

April 20,000 units

May 50,000 units

June 30,000 units

July 25,000 units

August 15,000 units

③ The selling price is \$10 per unit.

The Sales Budget

The individual months of April, May, and June are summed to obtain the total budgeted sales in units and dollars for the quarter ended June 30th



A screenshot of Microsoft Excel showing a sales budget table. The table has columns for April, May, June, and Quarter. The rows represent different budget components: Budgeted sales in units, Selling price per unit, and Total budgeted sales. The data is as follows:

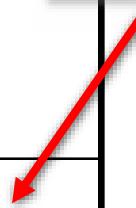
		April	May	June	Quarter
Budgeted sales in units		20,000	50,000	30,000	100,000
Selling price per unit	\$ 10	\$ 10	\$ 10	\$ 10	\$ 10
Total budgeted sales	\$ 200,000	\$ 500,000	\$ 300,000	\$ 1,000,000	

The Budgeted Income Statement

From Sales Budget

Royal Company
Budgeted Income Statement
For the Three Months Ended June 30

Sales (100,000 units @ \$10)	\$ 1,000,000
Cost of goods sold	_____
Gross margin	_____
Selling and administrative expenses	_____
Operating income	_____
Interest expense	_____
Net income	_____



Expected Cash Collections

- All sales are on account.
- Royal's collection pattern is:
 - 70% collected in the month of sale,
 - 25% collected in the month following sale,
 - 5% uncollectible.
- In April, the March 31st accounts receivable balance of \$30,000 will be collected in full.

Expected Cash Collections

The screenshot shows a Microsoft Excel spreadsheet titled "M25". The menu bar includes File, Edit, View, Insert, Format, Tools, Data, Window, Help, and Adobe PDF. The toolbar includes icons for file operations, data entry, and styling. The formula bar shows "M25" and a fx button. The spreadsheet has columns labeled A through J and rows labeled 1 through 19. Row 9 contains the text "Accounts receivable 3/31" followed by "\$ 30,000". Columns C, D, E, and F are labeled "April", "May", "June", and "Quarter" respectively. Row 18 contains the text "Total cash collections" followed by four blank lines for data entry.

M25										
	A	B	C	D	E	F	G	H	I	J
1										
8			April		May		June		Quarter	
9	Accounts receivable 3/31	\$ 30,000							\$ 30,000	
10										
11										
12										
13										
14										
15										
16										
17										
18	Total cash collections									
19										

Expected Cash Collections

	A	B	C	D	E	F	G	H	I	J
1				April	May	June				Quarter
8	Accounts receivable 3/31	\$ 30,000					\$ 30,000			
9	April Sales									
10	70% x \$200,000		140,000					140,000		
11	25% x \$200,000				50,000				50,000	
12										
13										
14										
15										
16										
17										
18	Total cash collections	\$ 170,000								
19										

From the Sales Budget for April.

Expected Cash Collections

		April	May	June	Quarter
8	Accounts receivable 3/31	\$ 30,000			\$ 30,000
9	April Sales				
10	70% x \$200,000	140,000			140,000
11	25% x \$200,000		50,000		50,000
12	May Sales				
13	70% x \$500,000		350,000		350,000
14	25% x \$500,000			125,000	125,000
15	Total cash collections	\$ 170,000	\$ 400,000		
16					
17					
18					
19					

From the Sales Budget for May.

Expected Cash Collections

The screenshot shows a Microsoft Excel spreadsheet titled "M29". The menu bar includes File, Edit, View, Insert, Format, Tools, Data, Window, Help, and Adobe PDF. The toolbar includes icons for opening files, saving, printing, and various data manipulation tools. The formula bar shows "M29" and a fx button. The ribbon shows Arial font and size 10, with a bold button highlighted.

	A	B	C	D	E	F	G	H	I	J
1				April	May	June				
8	Accounts receivable 3/31	\$ 30,000					\$	30,000		
10	April Sales									
11	70% x \$200,000		140,000					140,000		
12	25% x \$200,000			50,000				50,000		
13	May Sales									
14	70% x \$500,000			350,000				350,000		
15	25% x \$500,000				125,000			125,000		
16	Jun Sales									
17	70% x \$300,000				210,000			210,000		
18	Total cash collections		\$ 170,000		\$ 400,000		\$ 335,000		\$ 905,000	
19										

Royal Company
Budgeted Balance Sheet
June 30

Assets:

Cash

Accounts receivable

Raw materials inventory

Finished goods inventory

Land

Equipment

Total assets

75,000

Liabilities and Stockholders' Equity

Accounts payable

Common stock

Retained earnings

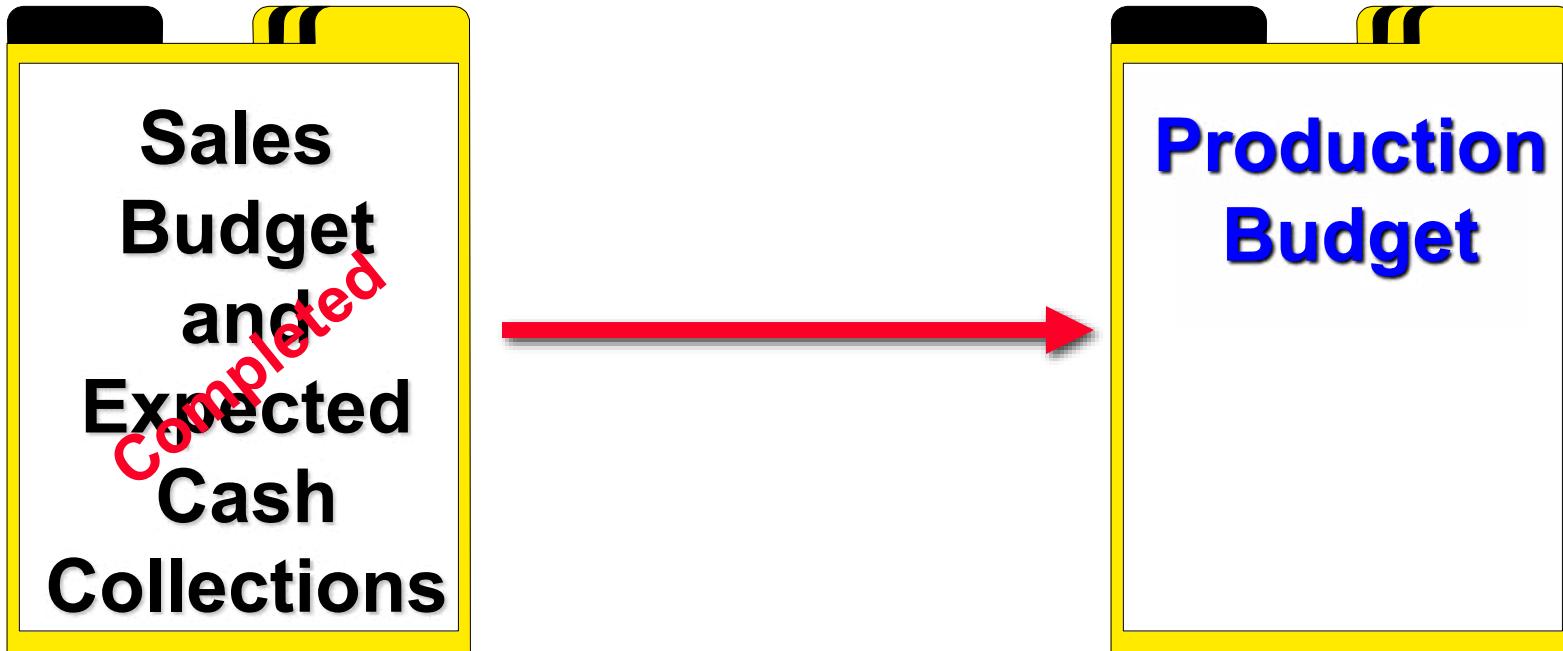
Total liabilities and stockholders' equity

25% of June sales of \$300,000 (calculated like in the Cash Collections Budget)

Master Budget Sub-schedules

1. Sales budget, including a schedule of expected cash collections
2. Production budget
3. Direct materials budget, including a schedule of expected cash disbursements for purchases of materials
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The Production Budget



The production budget must be adequate to meet budgeted sales and to provide for the desired ending inventory.

The Production Budget

- The management at Royal Company wants ending inventory to be equal to **20%** of the following month's budgeted sales in units.
- On March 31st, 4,000 units were on hand.
 - Let's prepare the production budget.

If Royal was a merchandising company it would prepare a **merchandise purchase budget** instead of a production budget.

The Production Budget

A screenshot of a Microsoft Excel spreadsheet titled "The Production Budget". The spreadsheet has a blue header bar with standard menu options: File, Edit, View, Insert, Format, Tools, Data, Window, Help, and Adobe PDF. Below the menu is a toolbar with various icons for file operations, printing, and data manipulation. The font is set to Arial, size 10, bold, and italicized. The formula bar shows "N75" and "fx". The spreadsheet area starts with column headers A through J and row numbers 20 through 27. Row 20 contains labels for months April, May, June, and Quarter. Rows 21 through 27 contain data for Budgeted Sales, Desired ending inventory, Total Needs, Beginning inventory, and Required production, with horizontal lines indicating values for each month.

	A	B	C	D	E	F	G	H	I	J
20		April	May	June	Quarter					
21	Budgeted Sales	20,000	50,000	30,000	100,000					
22	Add: Desired ending inventory									
23	Total Needs									
24	Less: Beginning inventory									
25	Required production									
26										
27										

The Production Budget

A screenshot of a Microsoft Excel spreadsheet titled "N43". The menu bar includes File, Edit, View, Insert, Format, Tools, Data, Window, Help, and Adobe PDF. The ribbon shows icons for file operations, text, tables, charts, and formulas. The spreadsheet has columns labeled A through J and rows numbered 1 through 27. Row 1 contains column headers A through J. Row 21 contains the label "Budgeted Sales" followed by values for April (20,000), May (50,000), June (30,000), and a "Quarter" total (100,000). Row 22 contains "Add: Desired ending inventory" with a value of 10,000. Row 23 contains "Total Needs" with a value of 30,000. Row 24 contains "Less: Beginning inventory" with a value of 4,000, which is highlighted with a red border and a red arrow points from a text box below it. Row 25 contains "Required production" with a value of 26,000.

	A	B	C	D	E	F	G	H	I	J
1										
21			April		May		June		Quarter	
22	Budgeted Sales		20,000		50,000		30,000		100,000	
23	Add: Desired ending inventory		10,000							
24	Total Needs		30,000							
25	Less: Beginning inventory		4,000							
26	Required production		26,000							
27										

March 31
ending inventory.

Budgeted May sales	50,000
Desired ending inventory %	20%
Desired ending inventory	<u>10,000</u>

The Production Budget

A screenshot of a Microsoft Excel spreadsheet titled "The Production Budget". The spreadsheet has a blue header bar with standard menu options: File, Edit, View, Insert, Format, Tools, Data, Window, Help, and Adobe PDF. Below the menu is a toolbar with various icons for file operations like Open, Save, Print, and Cut/Paste. The main area shows a production budget for four months: April, May, June, and a Quarter. The columns are labeled A through J, and rows are numbered 1 through 27. The data starts at row 21:

	A	B	C	D	E	F	G	H	I	J
1										
21				April	May	June				
22	Budgeted Sales		20,000		50,000		30,000		100,000	
23	Add: Desired ending inventory		10,000		6,000					
24	Total Needs		30,000		56,000					
25	Less: Beginning inventory		4,000		10,000					
26	Required production		26,000		46,000					
27										

Budgeting Example

① Royal Company is preparing budgets for the quarter ending June 30th.

② Budgeted sales for the next five months are:

<input type="checkbox"/> April	20,000 units
<input type="checkbox"/> May	50,000 units
<input type="checkbox"/> June	30,000 units
<input type="checkbox"/> July	25,000 units
<input type="checkbox"/> August	15,000 units

③ The selling price is \$10 per unit.

The Production Budget

A screenshot of a Microsoft Excel spreadsheet titled "The Production Budget". The menu bar includes File, Edit, View, Insert, Format, Tools, Data, Window, Help, and Adobe PDF. The ribbon shows icons for file operations, text, tables, charts, and formulas. The font is set to Arial, size 10, bold, and the cell A1 contains the letter 'B'. The spreadsheet has columns labeled A through J and rows numbered 1 through 27. Row 1 contains column headers A through J. Row 21 contains month names April, May, June, and Quarter. Rows 22 through 26 show budgeted sales, desired ending inventory, total needs, beginning inventory, and required production respectively. A red arrow points from the text "Assumed ending inventory = 10% x 25,000 units" to the value 5,000 in the "Quarter" column of row 23.

	A	B	C	D	E	F	G	H	I	J
1										
21			April	May	June					Quarter
22	Budgeted Sales		20,000	50,000	30,000					100,000
23	Add: Desired ending inventory		10,000	6,000	5,000					5,000
24	Total Needs		30,000	56,000	35,000					105,000
25	Less: Beginning inventory		4,000	10,000	6,000					4,000
26	Required production		26,000	46,000	29,000					101,000
27										

Assumed ending inventory
= 10% x 25,000 units

Master Budget Sub-schedules

1. Sales budget, including a schedule of expected cash collections
2. Production budget
3. Direct materials budget, including a schedule of expected cash disbursements for purchases of materials
4. Direct labor budget
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9. Budgeted balance sheet

The Direct Materials Budget

- At Royal Company, **five pounds** of material are required per unit of product.
- Management wants materials on hand at the end of each month equal to **10%** of the following month's production.
- On March 31, 13,000 pounds of material are on hand. Material cost is **\$0.40** per pound.

Let's prepare the direct materials budget.

The Direct Materials Budget

A screenshot of a Microsoft Excel spreadsheet titled "M48". The spreadsheet has a toolbar at the top with various icons for file operations, editing, and data entry. The menu bar includes File, Edit, View, Insert, Format, Tools, Data, Window, Help, and Adobe PDF. The ribbon shows "Arial" as the font and "10" as the size. A bold "B" button is highlighted in the ribbon.

The spreadsheet contains the following data:

	A	B	C	D	E	F	G	H	I	J
1										
28										
29	Production		April		May		June		Quarter	
30	Materials per unit (pounds)		26,000		46,000		29,000		101,000	
31	Production needs									
32	Add: Desired ending inventory									
33	Total needed									
34	Less: Beginning inventory									
35	Materials to be purchased									
36										

From production budget.

The Direct Materials Budget

A screenshot of a Microsoft Excel spreadsheet titled "M48". The menu bar includes File, Edit, View, Insert, Format, Tools, Data, Window, Help, and Adobe PDF. The ribbon shows icons for file operations, text, and numbers. The font is set to Arial, size 10, bold. The cell A1 contains "M48". The table below represents the Direct Materials Budget:

	A	B	C	D	E	F	G	H	I	J
1										
28				April	May	June				
29	Production			26,000	46,000	29,000				101,000
30	Materials per unit (pounds)			5	5	5				5
31	Production needs			130,000	230,000	145,000				505,000
32	Add: Desired ending inventory									
33	Total needed									
34	Less: Beginning inventory									
35	Materials to be purchased									
36										

The Direct Materials Budget

The screenshot shows a Microsoft Excel spreadsheet titled "N50". The menu bar includes File, Edit, View, Insert, Format, Tools, Data, Window, Help, and Adobe PDF. The ribbon has icons for file operations, text, and numbers. The main area displays a budget for direct materials. The columns are labeled A through J, and the rows are numbered 1 through 36. The data starts with "Production" in row 29, followed by "Materials per unit (pounds)" in row 30, "Production needs" in row 31, "Add: Desired ending inventory" in row 32, "Total needed" in row 33, "Less: Beginning inventory" in row 34, and "Materials to be purchased" in row 35. The "Quarter" column is also present. Red boxes highlight the "Desired ending inventory" in April (23,000), the "Beginning inventory" in May (13,000), and the "Materials to be purchased" in May (140,000). A yellow box labeled "March 31 inventory." points to the beginning inventory value.

	A	B	C	D	E	F	G	H	I	J
1										
28										
29	Production		April		May		June		Quarter	
30	Materials per unit (pounds)		26,000		46,000		29,000		101,000	
31	Production needs	5		5		5		5		5
32	Add: Desired ending inventory		130,000		230,000		145,000		505,000	
33	Total needed		23,000							
34	Less: Beginning inventory		153,000							
35	Materials to be purchased		13,000							
36			140,000		?					

10% of following month's production needs.

Calculate the materials to be purchased in May.

The Direct Materials Budget

A screenshot of a Microsoft Excel spreadsheet titled "The Direct Materials Budget". The spreadsheet is set up as a budget for the first quarter of the year. It includes columns for April, May, June, and a total for the Quarter. The data rows include Production, Materials per unit (pounds), Production needs, Add: Desired ending inventory, Total needed, Less: Beginning inventory, and Materials to be purchased. A red arrow points from the "Desired ending inventory" cell in the April row to the "Beginning inventory" cell in the May row, indicating the flow of inventory between months.

	A	B	C	D	E	F	G	H	I	J
27										
28				April	May	June	Quarter			
29	Production			26,000		46,000		29,000		101,000
30	Materials per unit (pounds)			5		5		5		5
31	Production needs			130,000		230,000		145,000		505,000
32	Add: Desired ending inventory			23,000		14,500				
33	Total needed			153,000		244,500				
34	Less: Beginning inventory			13,000		23,000				
35	Materials to be purchased			140,000		221,500				
36										

The Direct Materials Budget

	A	B	C	D	E	F	G	H	I	J
1										
28			April	May	June					
29	Production		26,000		46,000		29,000		101,000	
30	Materials per unit (pounds)		5		5		5		5	
31	Production needs		130,000		230,000		145,000		505,000	
32	Add: Desired ending inventory		23,000		14,500		11,500		11,500	
33	Total needed		153,000		244,500		156,500		516,500	
34	Less: Beginning inventory		13,000		23,000		14,500		13,000	
35	Materials to be purchased		140,000		221,500		142,000		503,500	
36										

Assumed ending inventory =
10% of July Production needs

Expected Cash Disbursement for Materials

- Royal pays **\$0.40 per pound** for its materials.
- **One-half** of a month's purchases is paid for in the month of purchase; the other half is paid in the following month.
- The March 31 accounts payable balance is \$12,000.



Let's calculate expected cash disbursements.

Royal Company
Budgeted Balance Sheet
June 30

Assets:

Cash

Accounts receivable

75,000

Raw materials inventory

4,600

Finished goods inventory

Land

Equipment

Total assets

Liabilities and Stockholders' Equity

Accounts payable

Common stock

Retained earnings

Total liabilities and stockholders' equity

11,500 lbs
at \$0.40/lb
(calculated
using end
Inventory
from Raw
Materials
budget)

Expected Cash Disbursement for Materials

The screenshot shows a Microsoft Excel spreadsheet titled "M59". The menu bar includes File, Edit, View, Insert, Format, Tools, Data, Window, Help, and Adobe PDF. The toolbar includes standard icons for file operations, cutting, pasting, and font selection. The formula bar shows "M59" and a formula input field. The main table has columns labeled A through J. Row 1 contains column headers A through J. Row 28 contains the text "Accounts payable 3/31". Rows 37 through 47 are blank. Row 48 contains the text "Total cash disbursements". The table structure is as follows:

	A	B	C	D	E	F	G	H	I	J
1										
28			April	May	June	Quarter				
37	Accounts payable 3/31		\$ 12,000				\$ 12,000			
38										
39										
40										
41										
42										
43										
44										
45										
46	Total cash disbursements		_____	_____	_____	_____	_____	_____	_____	_____
47			_____	_____	_____	_____	_____	_____	_____	_____

The Direct Materials Budget

A screenshot of a Microsoft Excel spreadsheet titled "M51". The menu bar includes File, Edit, View, Insert, Format, Tools, Data, Window, Help, and Adobe PDF. The ribbon shows icons for file operations, text, and numbers. The font is set to Arial, size 10, bold. The table below contains production and material requirements data for April, May, June, and a quarter total.

	A	B	C	D	E	F	G	H	I	J
1										
28			April		May		June		Quarter	
29	Production		26,000		46,000		29,000		101,000	
30	Materials per unit (pounds)		5		5		5		5	
31	Production needs		130,000		230,000		145,000		505,000	
32	Add: Desired ending inventory		23,000		14,500		11,500		11,500	
33	Total needed		153,000		244,500		156,500		516,500	
34	Less: Beginning inventory		13,000		23,000		14,500		13,000	
35	Materials to be purchased		140,000		221,500		142,000		503,500	
36										

Material (in pounds) to be purchased in April

Expected Cash Disbursement for Materials

M61										
	A	B	C	D	E	F	G	H	I	J
1										
28										
37	Accounts payable 3/31			April		May	June		Quarter	
38	April purchases		\$ 12,000					\$ 12,000		
39	50% x \$56,000			28,000				28,000		
40	50% x \$56,000				28,000			28,000		
41										
42										
43										
44										
45										
46	Total cash disbursements									
47										

Compute the expected cash disbursements for materials for the quarter.

$$140,000 \text{ lbs.} \times \$0.40/\text{lb.} = \$56,000$$

Expected Cash Disbursement for Materials

The screenshot shows a Microsoft Excel spreadsheet titled "L61". The menu bar includes File, Edit, View, Insert, Format, Tools, Data, Window, Help, and Adobe PDF. The toolbar includes standard icons for file operations, text, and numbers. The formula bar shows "L61" and a fx icon. The ribbon tabs include Home, Insert, Page Layout, Formulas, Data, Page Break Preview, and View.

	A	B	C	D	E	F	G	H	I	J
1										
28			April		May		June		Quarter	
37	Accounts payable 3/31		\$ 12,000					\$ 12,000		
38	April purchases									
39	50% × \$56,000		28,000					28,000		
40	50% × \$56,000			28,000				28,000		
41	May purchases									
42	50% × \$88,600			44,300				44,300		
43	50% × \$88,600				44,300			44,300		
44	June purchases									
45	50% × \$56,800				28,400			28,400		
46	Total cash disbursements		<u>\$ 40,000</u>	<u>\$ 72,300</u>	<u>\$ 72,700</u>			<u>\$ 185,000</u>		
47										

Royal Company
Budgeted Balance Sheet
June 30

Assets:

Cash

Accounts receivable

75,000

Raw materials inventory

4,600

Finished goods inventory

Land

Equipment

Total assets

Liabilities and Stockholders' Equity

Accounts payable

\$ 28,400

Common stock

Retained earnings

Total liabilities and stockholders' equity

50% of June purchases of \$56,800 (calculated like in the Cash paid for Materials Purchases Budget)

Master Budget Sub-schedules

1. Sales budget, including a schedule of expected cash collections
2. Production budget
3. Direct materials budget, including a schedule of expected cash disbursements for purchases of materials
4. Direct labor budget
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9. Budgeted balance sheet

The Direct Labor Budget

- At Royal, each unit of product requires **0.05 hours (3 minutes)** of direct labor.
- The Company has a “no layoff” policy so all employees will be paid for 40 hours of work each week.
- For purposes of our illustration assume that Royal has a “no layoff” policy, workers are paid at the rate of **\$10 per hour** regardless of the hours worked.
- For the next three months, the direct labor workforce will be paid for a **minimum of 1,500 hours** per month.

□ Let's prepare the direct labor budget.

The Direct Labor Budget

A screenshot of a Microsoft Excel spreadsheet titled "L70". The menu bar includes File, Edit, View, Insert, Format, Tools, Data, Window, Help, and Adobe PDF. The ribbon shows icons for file operations, followed by a toolbar with various icons like copy, paste, and search, and font settings for Arial at size 10. The worksheet has columns labeled A through J and rows numbered 1 through 55. Row 48 contains the header "Units of production" and "Direct labor per unit". Row 49 contains the header "Labor hours required". Row 50 contains the header "Total direct labor costs". Column B contains month labels "April", "May", "June", and "Quarter". The cells for April (B48, B49, B50, B51), May (C48, C49, C50, C51), June (D48, D49, D50, D51), and the Quarter (E48, E49, E50, E51) are highlighted with a red border. The cell B48 contains "26,000", B49 contains "46,000", B50 contains "29,000", and E49 contains "101,000". A red arrow points from the text "From production budget." in the green box below to the cell B48.

	A	B	C	D	E	F	G	H	I	J
1										
28										
48	Units of production		April		May		June		Quarter	
49	Direct labor per unit		26,000		46,000		29,000		101,000	
50	Labor hours required									
51										
52										
53										
54	Total direct labor costs									
55										

From production budget.

The Direct Labor Budget

A screenshot of a Microsoft Excel spreadsheet titled "L70". The menu bar includes File, Edit, View, Insert, Format, Tools, Data, Window, Help, and Adobe PDF. The ribbon shows icons for file operations, followed by a toolbar with various icons like copy, paste, and search, and a font size dropdown set to 10. The font style is Arial, and the bold button is selected. The spreadsheet contains data for units of production, direct labor per unit, and labor hours required, along with total direct labor costs for April, May, June, and the quarter.

	A	B	C	D	E	F	G	H	I	J
1										
28				April	May	June				
48	Units of production			26,000	46,000	29,000				101,000
49	Direct labor per unit			0.05	0.05	0.05				0.05
50	Labor hours required			1,300	2,300	1,450				5,050
51										
52										
53										
54	Total direct labor costs									
55										

The Direct Labor Budget

	A	B	C	D	E	F	G	H	I	J
1										
28					April	May	June			
48	Units of production		26,000		46,000		29,000		101,000	
49	Direct labor per unit		0.05		0.05		0.05		0.05	
50	Labor hours required		1,300		2,300		1,450		5,050	
51	Guaranteed labor hours		1,500		1,500		1,500			
52	Labor hours paid		1,500		2,300		1,500		5,300	
53										
54	Total direct labor costs									
55										

Greater of labor hours required
or labor hours guaranteed.

The Direct Labor Budget

A screenshot of a Microsoft Excel spreadsheet titled "The Direct Labor Budget". The spreadsheet has a blue header bar with standard menu options: File, Edit, View, Insert, Format, Tools, Data, Window, Help, and Adobe PDF. Below the menu is a toolbar with various icons for file operations like Open, Save, Print, and Cut/Paste. The main area shows a table with data for April, May, June, and a Quarter total.

	A	B	C	D	E	F	G	H	I	J
1										
28			April	May	June	Quarter				
48	Units of production		26,000	46,000	29,000	101,000				
49	Direct labor per unit		0.05	0.05	0.05	0.05				
50	Labor hours required		1,300	2,300	1,450	5,050				
51	Guaranteed labor hours		1,500	1,500	1,500					
52	Labor hours paid		1,500	2,300	1,500	5,300				
53	Hourly wage rate	\$	10	\$	10	\$	10	\$	10	
54	Total direct labor costs	\$	15,000	\$	23,000	\$	15,000	\$	53,000	
55										

Master Budget Sub-schedules

1. Sales budget, including a schedule of expected cash collections
2. Production budget
3. Direct materials budget, including a schedule of expected cash disbursements for purchases of materials
4. Direct labor budget
5. Manufacturing overhead budget
6. Selling and administrative expense budget
7. Cash budget
8. Budgeted income statement
9. Budgeted balance sheet

Manufacturing Overhead Budget

- At Royal, manufacturing overhead is applied to units of product on the basis of direct labor hours.
- The **variable** manufacturing overhead rate is **\$20 per direct labor hour**.
- Fixed manufacturing overhead is **\$50,000 per month**, which includes **\$20,000 of noncash costs** (primarily depreciation of plant assets).

Let's prepare the manufacturing overhead budget.

Manufacturing Overhead Budget

The screenshot shows a Microsoft Excel spreadsheet titled "O108". The menu bar includes File, Edit, View, Insert, Format, Tools, Data, Window, Help, and Adobe PDF. The toolbar includes icons for opening, saving, printing, and various data manipulation tools. The font is set to Arial at 10pt, and the style is bold.

	A	B	C	D	E	F	G	H	I	J
84										
85				April	May	June				
86	Budgeted DLH			1,300	2,300	1,450				5,050
87	Variable mfg. OH rate	\$ 20		\$ 20	\$ 20	\$ 20				\$ 20
88	Variable mfg. OH costs	\$ 26,000		\$ 46,000	\$ 29,000					\$ 101,000
89	Fixed mfg. OH costs									
90	Total mfg. OH costs									
91	Less: noncash costs									
92	Cash disbursements									
93	for manufacturing OH									
94										

Direct Labor Budget.

Manufacturing Overhead Budget

The screenshot shows a Microsoft Excel spreadsheet titled "N103". The menu bar includes File, Edit, View, Insert, Format, Tools, Data, Window, Help, and Adobe PDF. The toolbar below has icons for file operations, text styling (bold, italic, underline), and mathematical functions like SUM and percentage. The font is set to Arial at 10pt, bold, and italic.

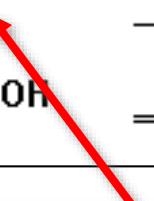
	A	B	C	D	E	F	G	H	I	J
84										
85					April	May	June	Quarter		
86	Budgeted DLH		1,300		2,300		1,450		5,050	
87	Variable mfg. OH rate	\$ 20		\$ 20		\$ 20		\$ 20		
88	Variable mfg. OH costs	\$ 26,000		\$ 46,000		\$ 29,000		\$ 101,000		
89	Fixed mfg. OH costs	\$ 50,000		\$ 50,000		\$ 50,000		\$ 150,000		
90	Total mfg. OH costs	76,000		96,000		79,000		251,000		
91	Less: non									
92	Cash disb									
93	for man									
94										

Total mfg. OH for quarter \$251,000 = \$49.70 per hour *

Total labor hours required 5,050

* rounded

Manufacturing Overhead Budget



A screenshot of a Microsoft Excel spreadsheet titled "O113". The menu bar includes File, Edit, View, Insert, Format, Tools, Data, Window, Help, and Adobe PDF. The toolbar includes various icons for file operations and data entry. The font is set to Arial, size 10, bold, italic, and underline are selected. The table below shows the Manufacturing Overhead Budget for April, May, June, and a Quarter.

	A	B	C	D	E	F	G	H	I	J
84										
85			April	May	June	Quarter				
86	Budgeted DLH		1,300	2,300	1,450	5,050				
87	Variable mfg. OH rate	\$ 20	\$ 20	\$ 20	\$ 20	\$ 20				
88	Variable mfg. OH costs	\$ 26,000	\$ 46,000	\$ 29,000	\$ 101,000					
89	Fixed mfg. OH costs	50,000	50,000	50,000	150,000					
90	Total mfg. OH costs	76,000	96,000	79,000	251,000					
91	Less: noncash costs	20,000	20,000	20,000	60,000					
92	Cash disbursements for manufacturing OH	\$ 56,000	\$ 76,000	\$ 59,000	\$ 191,000					
93										
94										

Depreciation is a noncash charge.

Ending Finished Goods Inventory

- ***Five pounds*** of material are required per unit of product, costing ***\$0.40 per pound.***

Ending Finished Goods Inventory

<u>Production costs per unit</u>	<u>Quantity</u>	<u>Cost</u>	<u>Total</u>
Direct materials	5.00 lbs.	\$ 0.40	\$ 2.00

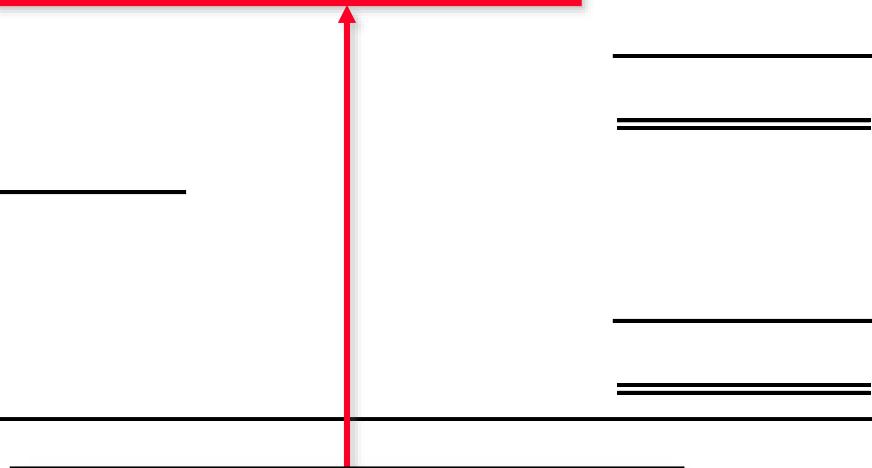
Direct materials
budget and information.

Ending Finished Goods Inventory

- ***Five pounds*** of material are required per unit of product, costing ***\$0.40 per pound.***
- Each unit of product requires ***0.05 hours***, costing ***\$10.00 per hour.***

Ending Finished Goods Inventory Budget

<u>Production costs per unit</u>	<u>Quantity</u>	<u>Cost</u>	<u>Total</u>
Direct materials	5.00 lbs.	\$ 0.40	\$ 2.00
Direct labor	0.05 hrs.	\$ 10.00	0.50



Direct labor budget.

Ending Finished Goods Inventory

- ***Five pounds*** of material are required per unit of product, costing ***\$0.40 per pound***.
- Each unit of product requires ***0.05 hours***, costing ***\$10.00 per hour***.
- The pre-determined overhead rate = ***\$49.70 per hour*** (from Mfg OH budget).

Ending Finished Goods Inventory Budget

<u>Production costs per unit</u>	<u>Quantity</u>	<u>Cost</u>	<u>Total</u>
Direct materials	5.00 lbs.	\$ 0.40	\$ 2.00
Direct labor	0.05 hrs.	\$10.00	0.50
Manufacturing overhead	0.05 hrs.	\$49.70	2.49
			<u><u>\$ 4.99</u></u>

Budgeted finished goods inventory

Ending inventory in units

Unit product cost

Ending finished goods inventory

\$ 4.99

?

$$\frac{\text{Total mfg. OH for quarter } \$251,000}{\text{Total labor hours required } 5,050} = \$49.70 \text{ per hour}$$

Ending Finished Goods Inventory

- **Five pounds** of material are required per unit of product, costing **\$0.40 per pound**.
- Each unit of product requires **0.05 hours**, costing **\$10.00 per hour**.
- The pre-determined overhead rate = **\$49.70 per hour** (from Mfg OH budget).
- **5,000 units** expected in Ending Finished Goods inventory (from Production budget).

Ending Finished Goods Inventory Budget

<u>Production costs per unit</u>	<u>Quantity</u>	<u>Cost</u>	<u>Total</u>
Direct materials	5.00 lbs.	\$ 0.40	\$ 2.00
Direct labor	0.05 hrs.	\$ 10.00	0.50
Manufacturing overhead	0.05 hrs.	\$ 49.70	2.49
			\$ 4.99

Budgeted finished goods inventory

Ending inventory in units

5,000

Unit product cost

\$ 4.99

Ending finished goods inventory

\$ 24,950

Production Budget.

Royal Company
Budgeted Balance Sheet
June 30

Assets:

Cash

Accounts receivable

75,000

Raw materials inventory

4,600

Finished goods inventory

24,950

Land

Equipment

Total assets

Liabilities and Stockholders' Equity

Accounts payable

\$ 28,400

Common stock

Retained earnings

Total liabilities and stockholders' equity

5,000 units
at \$4.99 each
(from Ending
Finished
Goods
Inventory
Budget)

The Budgeted Income Statement

Royal Company	
Budgeted Income Statement	
For the Three Months Ended June 30	
Sales (100,000 units @ \$10)	\$ 1,000,000
Cost of goods sold (100,000 @ \$4.99)	499,000
Gross margin	501,000
Selling and administrative expenses	
Operating income	
Interest expense	
Net income	

Unit Product
Cost = \$4.99
(data from
Ending
Finished Goods
Inventory budget)

Master Budget Sub-schedules

1. Sales budget, including a schedule of expected cash collections
2. Production budget
3. Direct materials budget, including a schedule of expected cash disbursements for purchases of materials
4. Direct labor budget
5. Manufacturing overhead budget
6. Selling and administrative expense budget
7. Cash budget
8. Budgeted income statement
9. Budgeted balance sheet

Selling and Administrative Expense Budget

- At Royal, the selling and administrative expense budget is divided into variable and fixed components.
- The **variable** selling and administrative expenses are \$0.50 per unit sold.
- **Fixed** selling and administrative expenses are \$70,000 per month.
- The fixed selling and administrative expenses include \$10,000 in costs – primarily depreciation – that are not cash outflows of the current month.

Let's prepare the company's selling and administrative expense budget.

Selling and Administrative Expense Budget

The screenshot shows a Microsoft Excel spreadsheet titled "Selling and Administrative Expense Budget". The top menu bar includes File, Edit, View, Insert, Format, Tools, Data, Window, Help, and Adobe PDF. The ribbon toolbar contains icons for file operations, text, and numbers. The formula bar shows "N81" and a fx button. The main area displays a budget table:

	A	B	C	D	E	F	G	H	I	J
1										
28				April	May	June				
48	Budgeted sales		20,000							
57	Variable S & A rate	\$ 0.50								
58	Variable expenses	\$ 10,000								
59	Fixed S & A expenses	70,000								
60	Total S & A expenses	80,000								
61	Less: Noncash expenses	10,000								
62	Cash S & A expenses	\$ 70,000								?
63										

Calculate the selling and administrative cash expenses for the quarter.

Selling Administrative Expense Budget

The screenshot shows a Microsoft Excel spreadsheet titled "Selling Adminstrative Expense Budget". The menu bar includes File, Edit, View, Insert, Format, Tools, Data, Window, Help, and Adobe PDF. The ribbon has icons for file operations, data analysis, and styling. The active cell is N78. The table below contains data for April, May, June, and a Quarter total.

	A	B	C	D	E	F	G	H	I	J
1										
28			April		May		June		Quarter	
48	Budgeted sales		20,000		50,000		30,000		100,000	
57	Variable S & A rate		\$ 0.50		\$ 0.50		\$ 0.50		\$ 0.50	
58	Variable expenses		\$ 10,000		\$ 25,000		\$ 15,000		\$ 50,000	
59	Fixed S & A expenses		70,000		70,000		70,000		210,000	
60	Total S & A expenses		80,000		95,000		85,000		260,000	
61	Less: Noncash expenses		10,000		10,000		10,000		30,000	
62	Cash S & A expenses		\$ 70,000		\$ 85,000		\$ 75,000		\$ 230,000	
63										

The Budgeted Income Statement

Royal Company
Budgeted Income Statement
For the Three Months Ended June 30

Sales (100,000 units @ \$10)	\$ 1,000,000
Cost of goods sold (100,000 @ \$4.99)	499,000
Gross margin	501,000
Selling and administrative expenses	260,000
Operating income	241,000
Interest expense	
Net income	

Selling and
Administrative
Expense Budget

Master Budget Sub-schedules

1. Sales budget, including a schedule of expected cash collections
2. Production budget
3. Direct materials budget, including a schedule of expected cash disbursements for purchases of materials
4. Direct labor budget
5. Manufacturing overhead budget
6. Selling and administrative expense budget
7. Cash budget
8. Budgeted income statement
9. Budgeted balance sheet

Format of the Cash Budget

The cash budget is divided into four sections:

1. **Cash receipts** section lists all cash inflows excluding cash received from financing;
2. **Cash disbursements** section consists of all cash payments excluding repayments of principal and interest;
3. Cash excess or deficiency section determines if the company will **need to borrow money** or if it will be able to repay funds previously borrowed; and
4. **Financing section** details the borrowings and repayments projected to take place during the budget period.

The Cash Budget

Assume the following information for Royal:

- Has an April 1 cash balance of \$40,000.
- Pays a cash dividend of \$49,000 in April.
- Maintains a minimum cash balance of \$30,000.
- Purchases \$143,700 of equipment in May and \$48,300 in June (both purchases paid in cash).
- Maintains a 16% open line of credit for \$75,000.
- Borrows on the first day of the month and repays loans on the last day of the month.

The Cash Budget

	A	B	C	D	E	F	G	H	I	J
1										
63	Beginning cash balance		\$ 40,000		May		June		Quarter	
64	Add: Cash collections		170,000							
65	Total cash available		<u>210,000</u>							
66	Less: Cash disbursements									
67	Materials		40,000							
68	Direct labor									
69	Manufacturing overhead									
70	Selling and administrative									
71	Dividend									
72	Total disbursements									
73										
74	Excess (deficiency)									
75	Financing:									
76	Borrowing									
77	Repayments									
78	Interest									
79	Total financing									
80	Ending cash balance									
81										

Beginning Cash Balance

The Cash Budget

	A	B	C	D	E	F	G	H	I	J
63			April		May		June		Quarter	
64	Beginning cash balance		\$ 40,000							
65	Add: Cash collections		170,000							
66	Total cash available		210,000							
67	Less: Cash disbursements									
68	Materials		40,000							
69	Direct labor									
70	Manufacturing overhead									
71	Selling and administrative									
72	Dividend									
73	Total disbursements									
74	Excess (deficiency)									
75	Financing:									
76	Borrowing									
77	Repayments									
78	Interest									
79	Total financing									
80	Ending cash balance									
81										

Schedule of Expected
Cash Collections.

Expected Cash Collections

The screenshot shows a Microsoft Excel spreadsheet titled "M29". The menu bar includes File, Edit, View, Insert, Format, Tools, Data, Window, Help, and Adobe PDF. The toolbar includes icons for opening, saving, and printing, along with a formula bar showing "M29" and a date "fx". The font is set to Arial, size 10, bold, and the cell A1 is selected.

	A	B	C	D	E	F	G	H	I	J
1				April	May	June				
8	Accounts receivable 3/31	\$ 30,000					\$ 30,000			
9	April Sales									
10	70% x \$200,000	140,000					140,000			
11	25% x \$200,000		50,000					50,000		
12	May Sales									
13	70% x \$500,000		350,000				350,000			
14	25% x \$500,000			125,000				125,000		
15	Jun Sales									
16	70% x \$300,000			210,000			210,000			
17	Total cash collections	\$ 170,000		\$ 400,000		\$ 335,000		\$ 905,000		
18										
19										

The Cash Budget

A screenshot of a Microsoft Excel spreadsheet titled "The Cash Budget". The spreadsheet is set up as a table with columns A through J. Row 63 contains the beginning cash balance of \$40,000. Row 64 shows cash collections of \$170,000, resulting in total cash available of \$210,000. Row 65 lists cash disbursements for materials (\$40,000), direct labor (\$15,000), manufacturing overhead (\$56,000), selling and administrative (\$70,000), and equipment purchase (\$0). The total disbursements are \$230,000. An arrow points from a red callout box labeled "Schedule of Expected Cash Disbursements." to the "Equipment purchase" row. The ending cash balance is listed as \$0.

Schedule of Expected Cash Disbursements.									
Beginning cash balance	\$ 40,000								
Add: Cash collections	170,000								
Total cash available	210,000								
Less: Cash disbursements									
Materials	40,000								
Direct labor	15,000								
Manufacturing overhead	56,000								
Selling and administrative	70,000								
Equipment purchase	-								
Dividend	49,000								
Total disbursements	230,000								
Excess (deficiency)									
Financing:									
Borrowing									
Repayments									
Interest									
Total financing									
Ending cash balance									

Expected Cash Disbursement for Materials

The screenshot shows a Microsoft Excel spreadsheet titled "L61". The menu bar includes File, Edit, View, Insert, Format, Tools, Data, Window, Help, and Adobe PDF. The toolbar includes icons for opening, saving, and printing, along with a formula bar showing "L61" and a fx button. The font is set to Arial, size 10, bold, and the cell A1 contains the letter "B".

	A	B	C	D	E	F	G	H	I	J
1										
28			April		May		June		Quarter	
37	Accounts payable 3/31		\$ 12,000						\$ 12,000	
38	April purchases									
39	50% × \$56,000		28,000						28,000	
40	50% × \$56,000			28,000					28,000	
41	May purchases									
42	50% × \$88,600			44,300					44,300	
43	50% × \$88,600				44,300				44,300	
44	June purchases									
45	50% × \$56,800				28,400				28,400	
46	Total cash disbursements		\$ 40,000		\$ 72,300		\$ 72,700		\$ 185,000	
47										

The Cash Budget

	A	B	C	D	E	F	G	H	I	J
	M88	f								
63			April		May		June		Quarter	
64	Beginning cash balance		\$ 40,000							
65	Add: Cash collections		170,000							
66	Total cash available		<u>210,000</u>							
67	Less: Cash disbursements									
68	Materials		40,000							
69	Direct labor		15,000							
70	Manufacturing overhead		56,000							
71	Selling and administrative		70,000							
72	Equipment purchase		-							
73	Dividend		49,000							
74	Total disbursements		<u>230,000</u>							
75	Excess (deficiency)									
76	Financing:									
77	Borrowing									
78	Repayments									
79	Interest									
80	Total financing									
81	Ending cash balance									
82										

Direct Labor
Budget.



The Direct Labor Budget

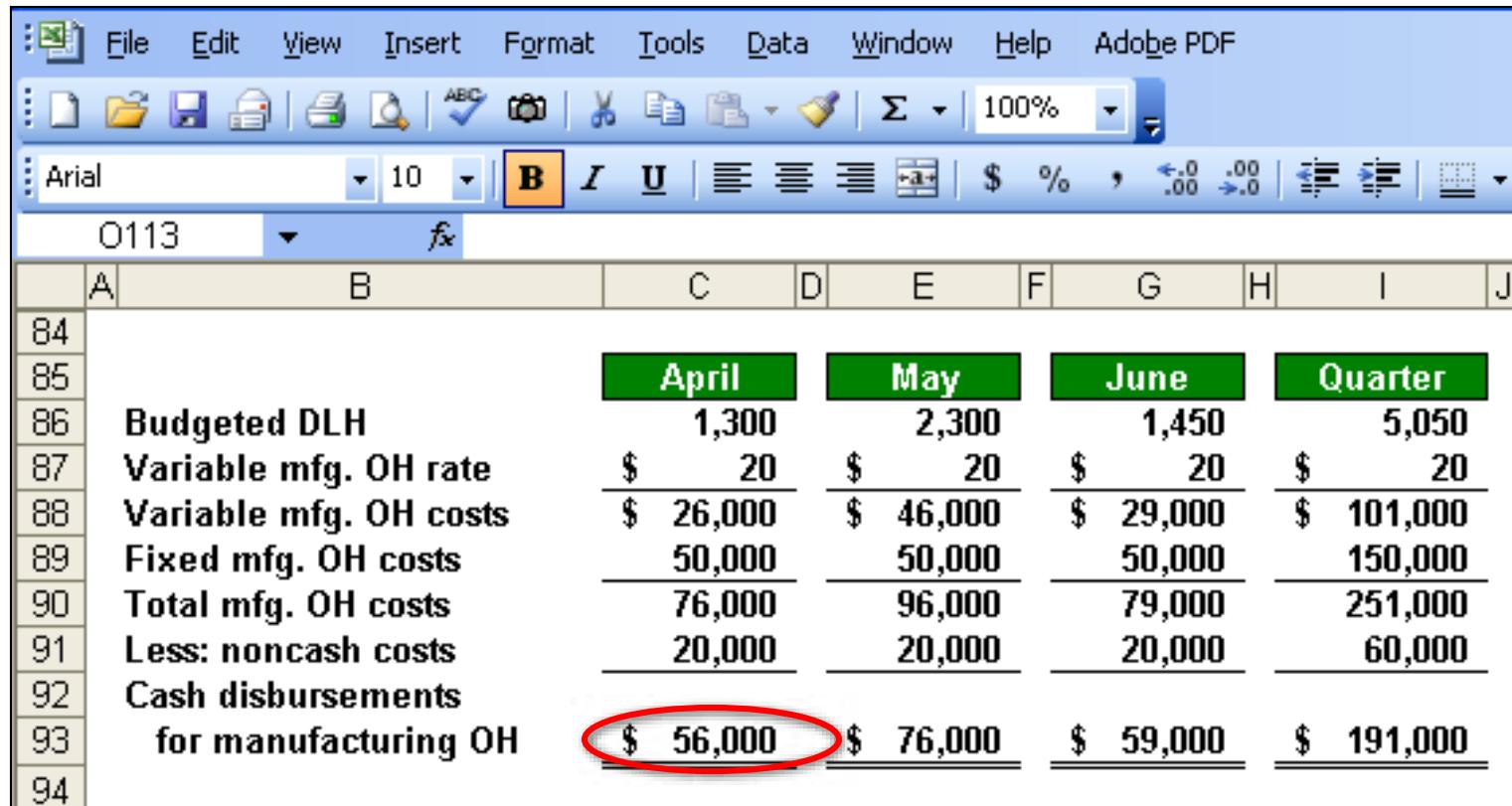
	A	B	C	D	E	F	G	H	I	J
1										
28			April	May	June					
48	Units of production		26,000		46,000		29,000		101,000	
49	Direct labor per unit		0.05		0.05		0.05		0.05	
50	Labor hours required		1,300		2,300		1,450		5,050	
51	Guaranteed labor hours		1,500		1,500		1,500			
52	Labor hours paid		1,500		2,300		1,500		5,300	
53	Hourly wage rate	\$ 10		\$ 10		\$ 10		\$ 10		
54	Total direct labor costs	<u>\$ 15,000</u>		<u>\$ 23,000</u>		<u>\$ 15,000</u>		<u>\$ 53,000</u>		
55										

The Cash Budget

	A	B	C	D	E	F	G	H	I	J
	M88	f								
63			April		May		June		Quarter	
64	Beginning cash balance		\$ 40,000							
65	Add: Cash collections		170,000							
66	Total cash available		<u>210,000</u>							
67	Less: Cash disbursements									
68	Materials		40,000							
69	Direct labor		15,000							
70	Manufacturing overhead		56,000							
71	Selling and administrative		70,000							
72	Equipment purchase		-							
73	Dividend		49,000							
74	Total disbursements		<u>230,000</u>							
75	Excess (deficiency)									
76	Financing:									
77	Borrowing									
78	Repayments									
79	Interest									
80	Total financing									
81	Ending cash balance									
82										

Manufacturing
Overhead Budget.

Manufacturing Overhead Budget



The screenshot shows a Microsoft Excel spreadsheet titled "O113". The menu bar includes File, Edit, View, Insert, Format, Tools, Data, Window, Help, and Adobe PDF. The toolbar includes various icons for file operations and data entry. The font is set to Arial, size 10, bold, italic, and underline are selected. The formula bar shows "0113". The spreadsheet contains data from row 84 to 93, organized into columns A through J. The data includes budgeted DLH for April, May, June, and a total for the quarter. It also details variable manufacturing overhead costs, fixed manufacturing overhead costs, and noncash costs, leading to cash disbursements for manufacturing overhead.

	A	B	C	D	E	F	G	H	I	J
84										
85			April	May	June	Quarter				
86	Budgeted DLH		1,300	2,300	1,450	5,050				
87	Variable mfg. OH rate	\$ 20	\$ 20	\$ 20	\$ 20	\$ 20				
88	Variable mfg. OH costs	\$ 26,000	\$ 46,000	\$ 29,000	\$ 101,000					
89	Fixed mfg. OH costs	50,000	50,000	50,000	150,000					
90	Total mfg. OH costs	76,000	96,000	79,000	251,000					
91	Less: noncash costs	20,000	20,000	20,000	60,000					
92	Cash disbursements									
93	for manufacturing OH	\$ 56,000	\$ 76,000	\$ 59,000	\$ 191,000					
94										

The Cash Budget

	A	B	C	D	E	F	G	H	I	J
			April	May	June					Quarter
63	Beginning cash balance		\$ 40,000							
64	Add: Cash collections		170,000							
65	Total cash available		<u>210,000</u>							
66	Less: Cash disbursements									
67	Materials		40,000							
68	Direct labor		15,000							
69	Manufacturing overhead		56,000							
70	Selling and administrative		70,000							
71	Equipment purchase		-							
72	Dividend		49,000							
73	Total disbursements		<u>230,000</u>							
74	Excess (deficiency)									
75	Financing:									
76	Borrowing									
77	Repayments									
78	Interest									
79	Total financing									
80	Ending cash balance									

Selling and Administrative
Expense Budget.

Selling Administrative Expense Budget

The screenshot shows a Microsoft Excel spreadsheet titled "Selling Adminstrative Expense Budget". The menu bar includes File, Edit, View, Insert, Format, Tools, Data, Window, Help, and Adobe PDF. The ribbon has icons for file operations, data analysis, and styling. The active cell is N78. The table below contains budget data for April, May, June, and the Quarter.

	A	B	C	D	E	F	G	H	I	J
1										
28			April		May		June		Quarter	
48	Budgeted sales		20,000		50,000		30,000		100,000	
57	Variable S & A rate		\$ 0.50		\$ 0.50		\$ 0.50		\$ 0.50	
58	Variable expenses		\$ 10,000		\$ 25,000		\$ 15,000		\$ 50,000	
59	Fixed S & A expenses		70,000		70,000		70,000		210,000	
60	Total S & A expenses		80,000		95,000		85,000		260,000	
61	Less: Noncash expenses		10,000		10,000		10,000		30,000	
62	Cash S & A expenses		<u>\$ 70,000</u>		<u>\$ 85,000</u>		<u>\$ 75,000</u>		<u>\$ 230,000</u>	
63										

The Cash Budget

Assume the following information for Royal:

- Has an April 1 cash balance of \$40,000.
- Pays a cash dividend of \$49,000 in April.
- Maintains a minimum cash balance of \$30,000.
- Purchases \$143,700 of equipment in May and \$48,300 in June (both purchases paid in cash).
- Maintains a 16% open line of credit for \$75,000.
- Borrows on the first day of the month and repays loans on the last day of the month.

The Cash Budget

	A	B	C	D	E	F	G	H	I	J
1										
63			April		May		June		Quarter	
64	Beginning cash balance		\$ 40,000							
65	Add: Cash collections		170,000							
66	Total cash available		210,000							
67	Less: Cash disbursements									
68	Materials		40,000							
69	Direct labor		15,000							
70	Manufacturing overhead		56,000							
71	Selling and administrative		70,000							
72	Equipment purchase		-							
73	Dividend		49,000							
74	Total disbursements		230,000							
75	Excess (deficiency)		(20,000)							
76	Financing:									
77	Borrowing									
78	Repayments									
79	Interest									
80	Total financing									
81	Ending cash balance									
82										

\$49,000 Dividend.

49,000

The Cash Budget

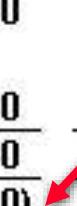
Assume the following information for Royal:

- Has an April 1 cash balance of \$40,000.
- Pays a cash dividend of \$49,000 in April.
- Maintains a minimum cash balance of \$30,000.
- Purchases \$143,700 of equipment in May and \$48,300 in June (both purchases paid in cash).
- Maintains a 16% open line of credit for \$75,000.
- Borrows on the first day of the month and repays loans on the last day of the month.

The Cash Budget

		April	May	June	Quarter
63	Beginning cash balance	\$ 40,000			
64	Add: Cash collections	170,000			
65	Total cash available	<u>210,000</u>			
66	Less: Cash disbursements				
67	Materials	40,000			
68	Direct labor	15,000			
69	Manufacturing overhead	56,000			
70	Selling and administrative	70,000			
71	Equipment purchase	-			
72	Dividend	49,000			
73	Total disbursements	<u>230,000</u>			
74	Excess (deficiency)	(20,000)			
75	Financing:				
76	Borrowing				
77	Repayments				
78	Interest				
79	Total financing				
80	Ending cash balance				

Because Royal maintains a cash balance of \$30,000, the company must borrow \$50,000 on its line-of-credit.



The Cash Budget

		C	D	E	F	G	H	I	J
		April	May	June					Quarter
63	Beginning cash balance	\$ 40,000							
64	Add: Cash collections	170,000							
65	Total cash available	<u>210,000</u>							
66	Less: Cash disbursements								
67	Materials	40,000							
68	Direct labor	15,000							
69	Manufacturing overhead	56,000							
70	Selling and administrative	70,000							
71	Equipment purchase	-							
72	Dividend	49,000							
73	Total disbursements	<u>230,000</u>							
74	Excess (deficiency)	(20,000)							
75	Financing:								
76	Borrowing	50,000							
77	Repayments	-							
78	Interest	-							
79	Total financing	<u>50,000</u>							
80	Ending cash balance	\$ 30,000							

Because Royal maintains a cash balance of \$30,000, the company must borrow \$50,000 on its line-of-credit.



Ending cash balance for April is the beginning May balance.

The Cash Budget

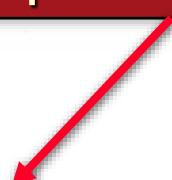
Assume the following information for Royal:

- Has an April 1 cash balance of \$40,000.
- Pays a cash dividend of \$49,000 in April.
- Maintains a minimum cash balance of \$30,000.
- Purchases \$143,700 of equipment in May and \$48,300 in June (both purchases paid in cash).
- Maintains a 16% open line of credit for \$75,000.
- Borrows on the first day of the month and repays loans on the last day of the month.

The Cash Budget

	A	B	C	D	E	F	G	H	I	J
			April	May	June					Quarter
63	Beginning cash balance	\$ 40,000	\$ 30,000							
64	Add: Cash collections	170,000	400,000							
65	Total cash available	<u>210,000</u>	<u>430,000</u>							
66	Less: Cash disbursements									
67	Materials	40,000	72,300							
68	Direct labor	15,000	23,000							
69	Manufacturing overhead	56,000	76,000							
70	Selling and administrative	70,000	85,000							
71	Equipment purchase	-	143,700							
72	Dividend	49,000	-							
73	Total disbursements	<u>230,000</u>	<u>400,000</u>							
74	Excess (deficiency)	(20,000)	30,000							
75	Financing:									
76	Borrowing	50,000	-							
77	Repayments	-	-							
78	Interest	-	-							
79	Total financing	<u>50,000</u>	<u>-</u>							
80	Ending cash balance	<u>\$ 30,000</u>	<u>\$ 30,000</u>							
81										
82										

Royal spends \$143,700
May to purchase Equipment



The Cash Budget

Assume the following information for Royal:

- Has an April 1 cash balance of \$40,000.
- Pays a cash dividend of \$49,000 in April.
- Maintains a minimum cash balance of \$30,000.
- Purchases \$143,700 of equipment in May and \$48,300 in June (both purchases paid in cash).
- Maintains a 16% open line of credit for \$75,000.
- Borrows on the first day of the month and repays loans on the last day of the month.

The Cash Budget

A screenshot of a Microsoft Excel spreadsheet titled "The Cash Budget". The spreadsheet has a blue header bar with various icons and the text "Arial" and "10". The main area shows a cash budget for four months: April, May, June, and a total for the Quarter. The columns are labeled A through J, and rows are numbered 63 through 82. The data includes beginning cash balance, cash collections, total cash available, cash disbursements (Materials, Direct labor, Manufacturing overhead, Selling and administrative, Equipment purchase, Dividend), total disbursements, excess/deficiency, financing (Borrowing, Repayments, Interest), and ending cash balance. The ending cash balance for June and the Quarter total are circled in red.

	M88	fx	C	D	E	F	G	H	I	J
	A	B	C	D	E	F	G	H	I	J
63			April		May		June		Quarter	
64	Beginning cash balance	\$ 40,000	\$ 30,000	\$ 30,000	\$ 40,000					
65	Add: Cash collections	170,000	400,000	335,000	905,000					
66	Total cash available	210,000	430,000	365,000	945,000					
67	Less: Cash disbursements									
68	Materials	40,000	72,300	72,700	185,000					
69	Direct labor	15,000	23,000	15,000	53,000					
70	Manufacturing overhead	56,000	76,000	59,000	191,000					
71	Selling and administrative	70,000	85,000	75,000	230,000					
72	Equipment purchase	-	143,700	48,300	192,000					
73	Dividend	49,000	-	-	49,000					
74	Total disbursements	230,000	400,000	270,000	900,000					
75	Excess (deficiency)	(20,000)	30,000	95,000	45,000					
76	Financing:									
77	Borrowing	50,000	-	-	50,000					
78	Repayments	-	-	(50,000)	(50,000)					
79	Interest	-	-	(2,000)	(2,000)					
80	Total financing	50,000	-	(52,000)	(2,000)					
81	Ending cash balance	\$ 30,000	\$ 30,000	\$ 43,000	\$ 43,000					
82										

Royal Company
Budgeted Balance Sheet
June 30

**Cash
Budget**

Assets:

Cash	\$ 43,000
Accounts receivable	75,000
Raw materials inventory	4,600
Finished goods inventory	24,950
Land	
Equipment	
Total assets	<hr/> <hr/>

Liabilities and Stockholders' Equity

Accounts payable	\$ 28,400
Common stock	
Retained earnings	
Total liabilities and stockholders' equity	<hr/> <hr/>

Master Budget Sub-schedules

1. Sales budget, including a schedule of expected cash collections
2. Production budget
3. Direct materials budget, including a schedule of expected cash disbursements for purchases of materials
4. Direct labor budget
5. Manufacturing overhead budget
6. Selling and administrative expense budget
7. Cash budget
8. Budgeted income statement
9. Budgeted balance sheet

The Budgeted Income Statement

Royal Company Budgeted Income Statement For the Three Months Ended June 30	
Sales (100,000 units @ \$10)	\$ 1,000,000
Cost of goods sold (100,000 @ \$4.99)	499,000
Gross margin	501,000
Selling and administrative expenses	260,000
Operating income	241,000
Interest expense	2,000
Net income	\$ 239,000

Sales Budget.

Ending Finished Goods Inventory.

Selling and Administrative Expense Budget.

Interest accrued from debt that is recorded on Cash budget

Master Budget Sub-schedules

1. Sales budget, including a schedule of expected cash collections
2. Production budget
3. Direct materials budget, including a schedule of expected cash disbursements for purchases of materials
4. Direct labor budget
5. Manufacturing overhead budget
6. Selling and administrative expense budget
7. Cash budget
8. Budgeted income statement
9. Budgeted balance sheet

The Budgeted Balance Sheet

Royal reported the following account balances prior to preparing its budgeted financial statements:

- Land - \$50,000
- Common stock - \$200,000
- Retained earnings - \$146,150 (April 1)
- Equipment - \$175,000

Royal Company
Budgeted Balance Sheet
June 30

Assets:

Cash	\$ 43,000
Accounts receivable	75,000
Raw materials inventory	4,600
Finished goods inventory	24,950
Land	50,000
Equipment	367,000
Total assets	564,550

Land &
Equipment

Liabilities and Stockholders' Equity

Accounts payable	\$ 28,400
Common stock	200,000
Retained earnings	
Total liabilities and stockholders' equity	

Common
Stock

Royal Company
Budgeted Balance Sheet
June 30

Assets:		
Cash	\$	Beginning balance
Accounts receivable		Add: net income
Raw materials inventory		Deduct: dividends
Finished goods inventory		Ending balance
Land		
Equipment		
Total assets	=\$	\$146,150
		239,000
		(49,000)
		<u>\$336,150</u>
 Liabilities and Stockholders' Equity		
Accounts payable	\$	24,950
Common stock		50,000
Retained earnings		367,000
Total liabilities and stockholders' equity	=\$	564,550

Beginning balance	\$146,150
Add: net income	239,000
Deduct: dividends	(49,000)
Ending balance	<u>\$336,150</u>

1,000	24,950
	50,000
	367,000
	<u>564,550</u>

28,400	200,000
	336,150
	<u>\$ 564,550</u>