Operating Budgets: Planning

- Budgeting Overview & Process

- Mechanics of Budgeting

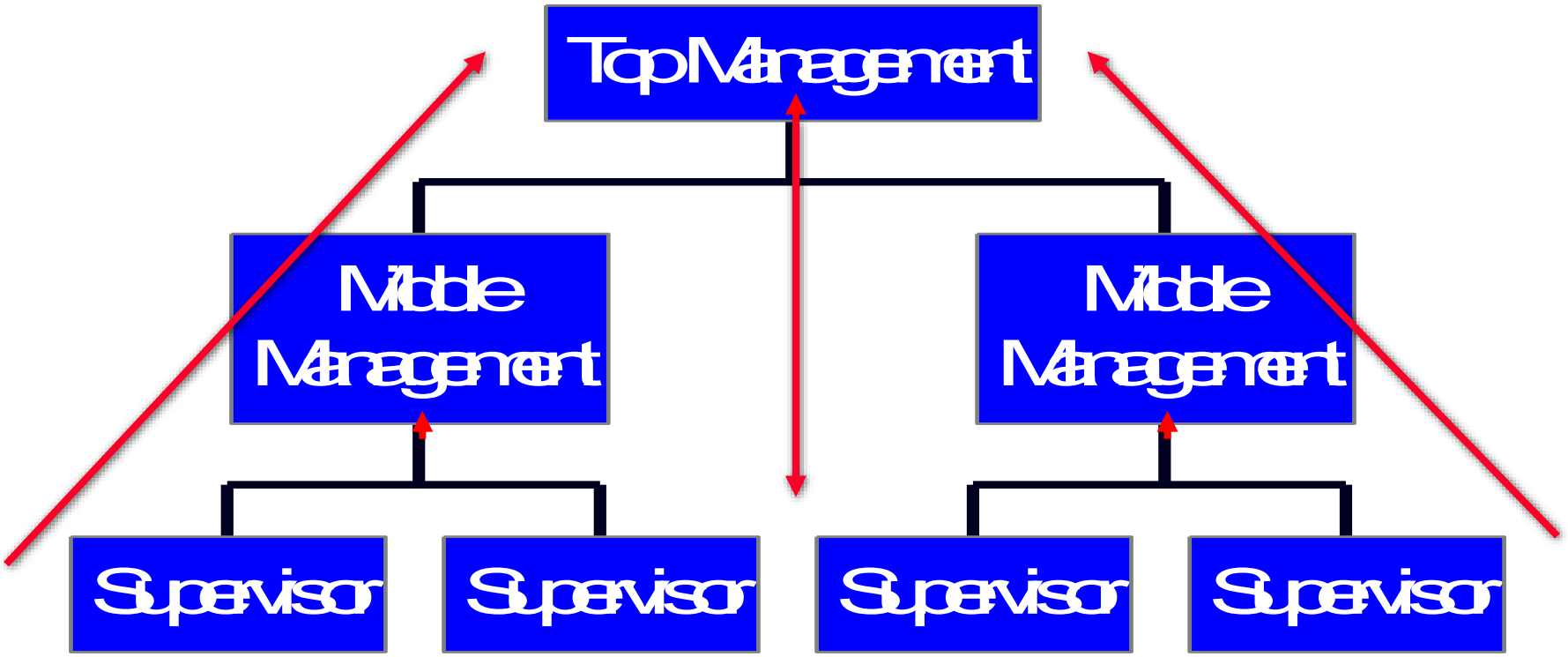
Definition

- **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

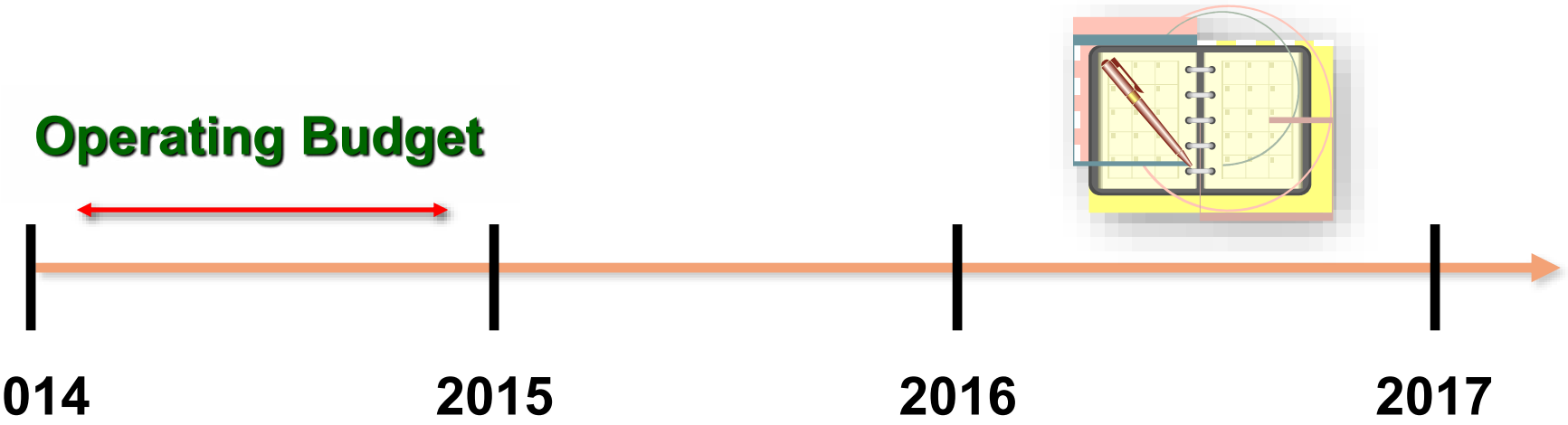
- **Budgets are rarely linear**
  - Each step goes through revisions
  - Entire cycles get iterated

- **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



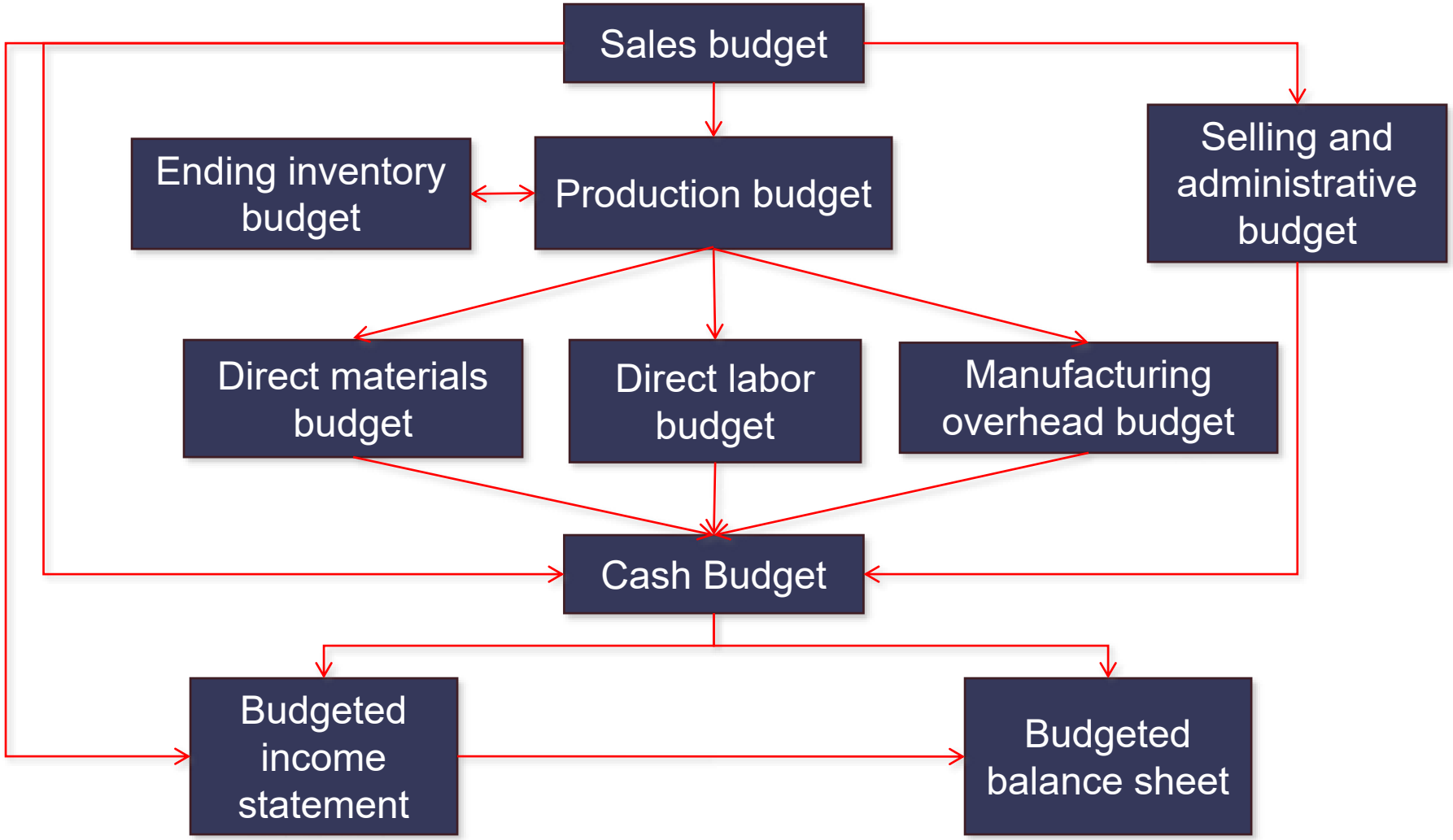
The budget period should match the time horizon over which managers can enact meaningful change. Operating budgets often cover a one-year (and quarterly sub-periods) period corresponding to a company's fiscal year.

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

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

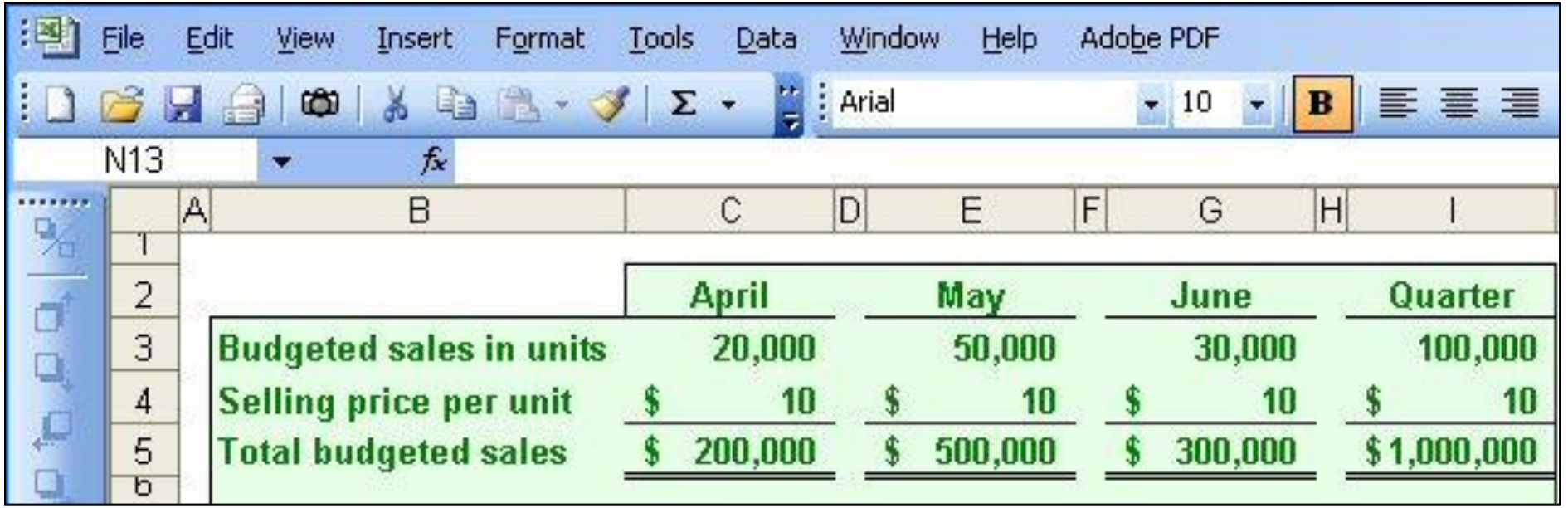
❷ Budgeted sales for the next five months are:

April	20,000 units
May	50,000 units
June	30,000 units
July	25,000 units
August	15,000 units

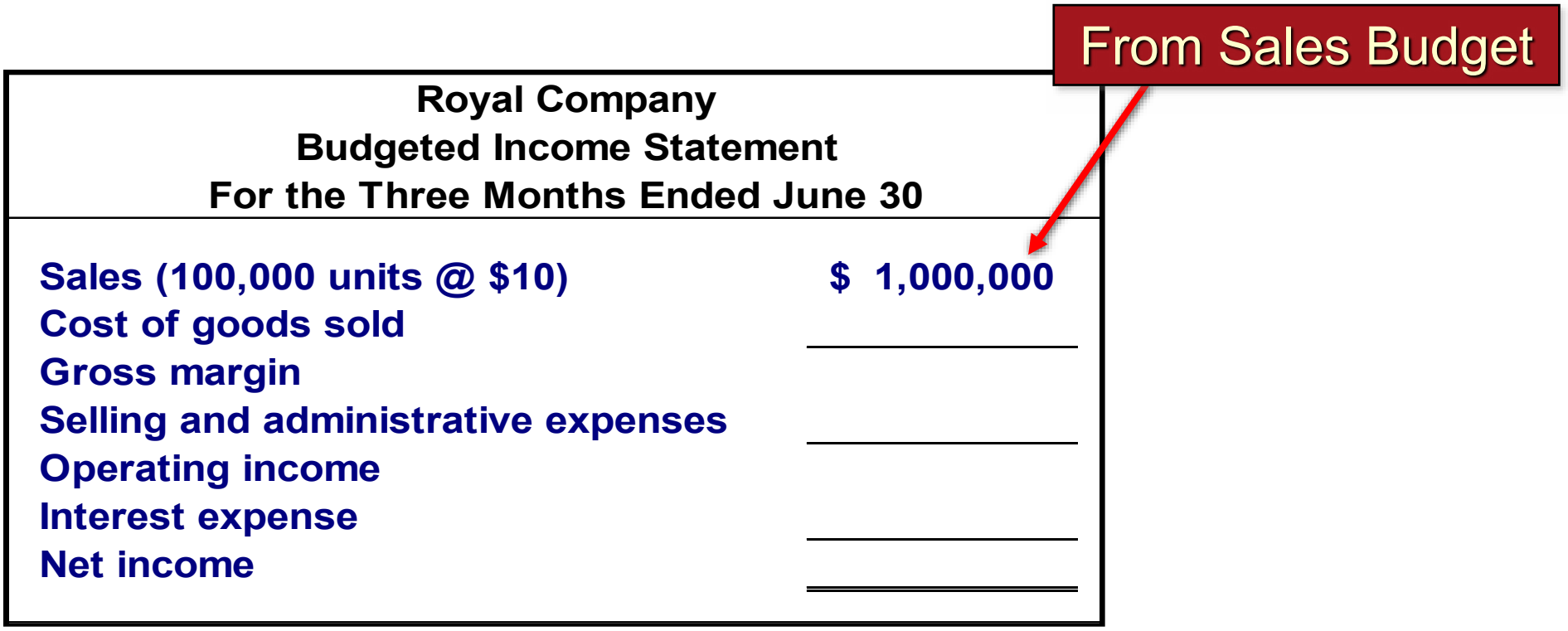
❸ The selling price is $10 per unit.

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



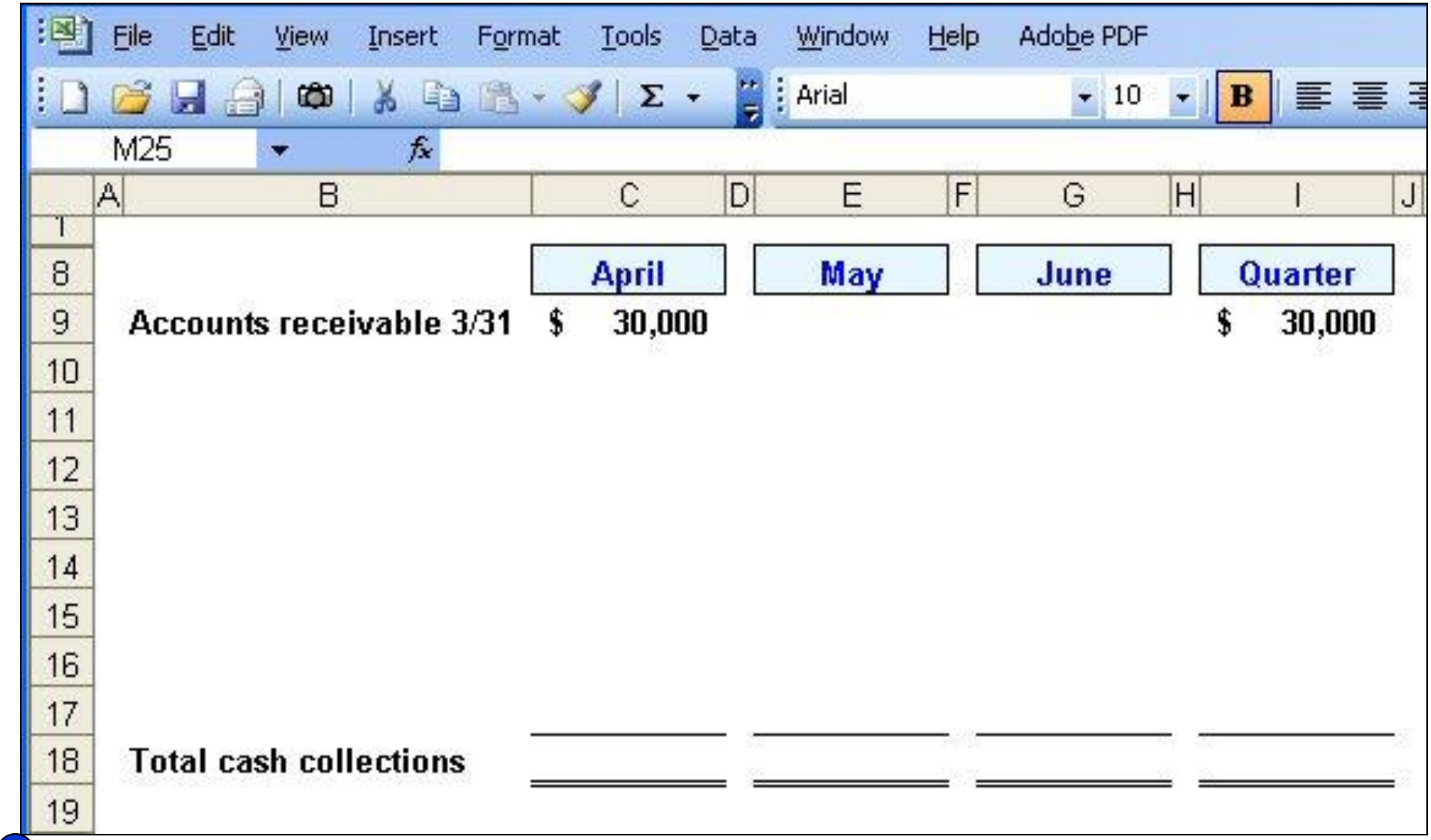
The Budgeted Income Statement



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



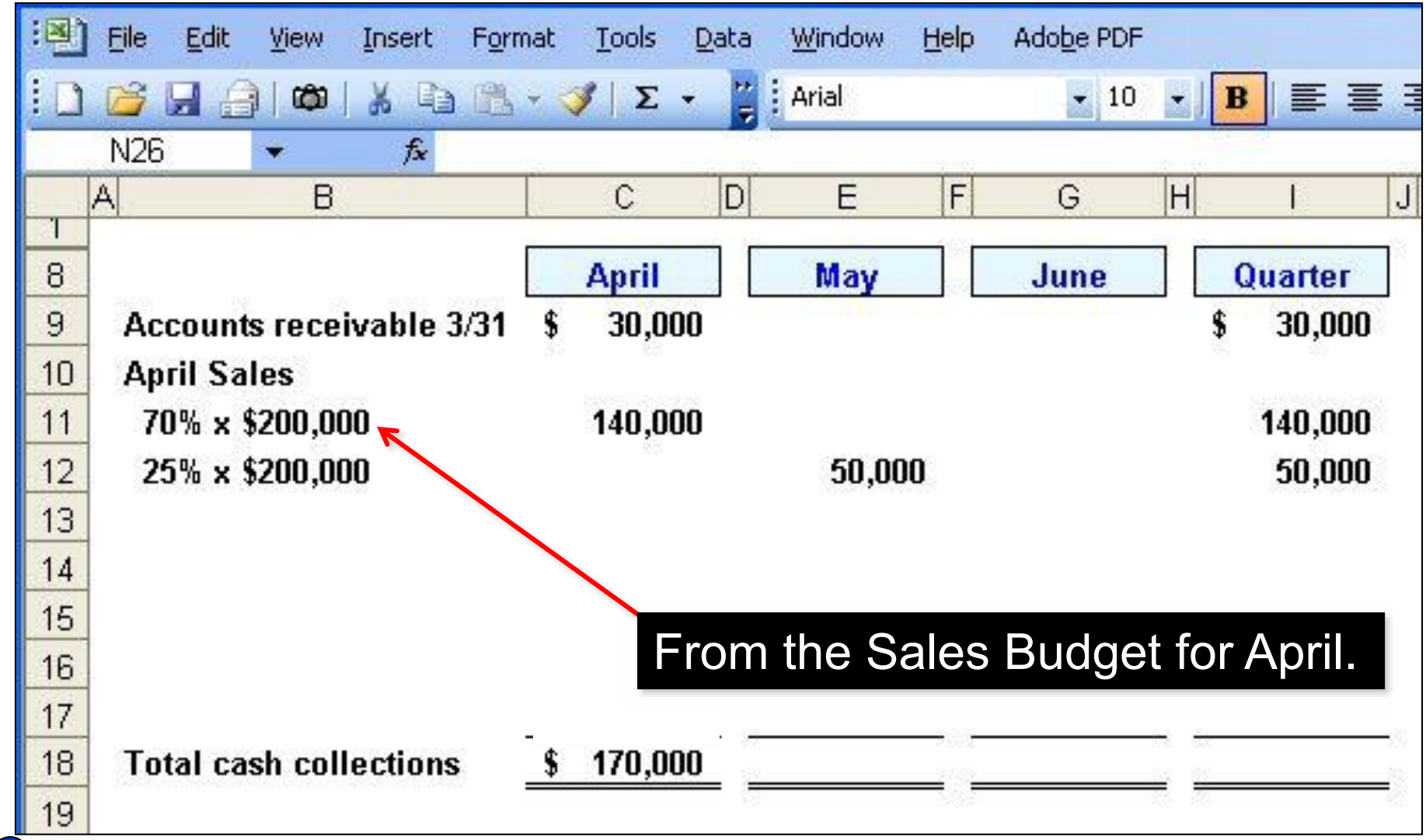
File Edit View Insert Format Tools Data Window Help Adobe PDF

Arial 10 B

M25

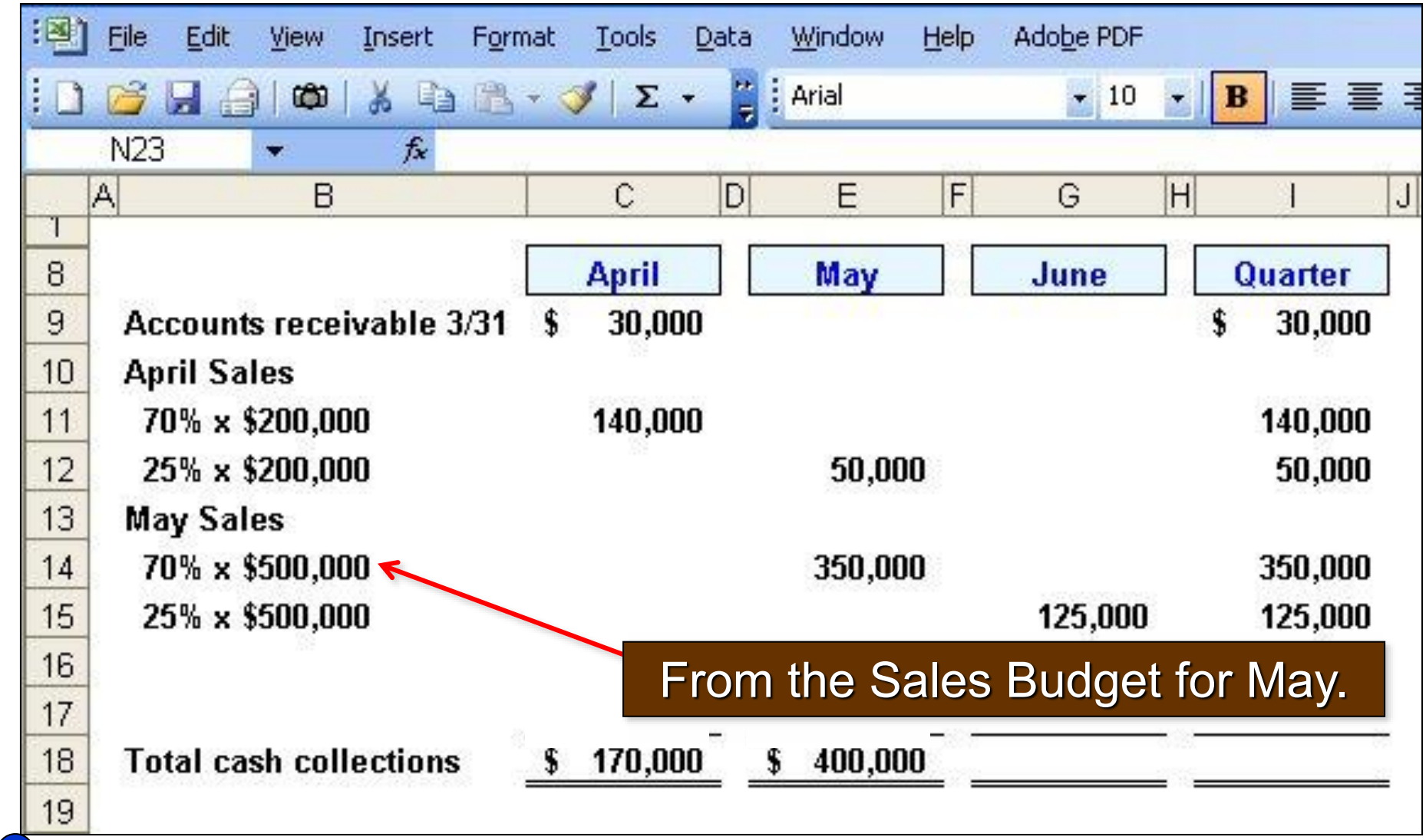
	A	B	C	D	E	F	G	H	I	J
8			April		May		June		Quarter	
9		Accounts receivable 3/31	$ 30,000						$ 30,000	
10										
11										
12										
13										
14										
15										
16										
17										
18		Total cash collections								
19										

Expected Cash Collections



	April	May	June	Quarter
Accounts receivable 3/31	$ 30,000			$ 30,000
April Sales				
70% x $200,000	140,000			140,000
25% x $200,000		50,000		50,000
Total cash collections	$ 170,000			

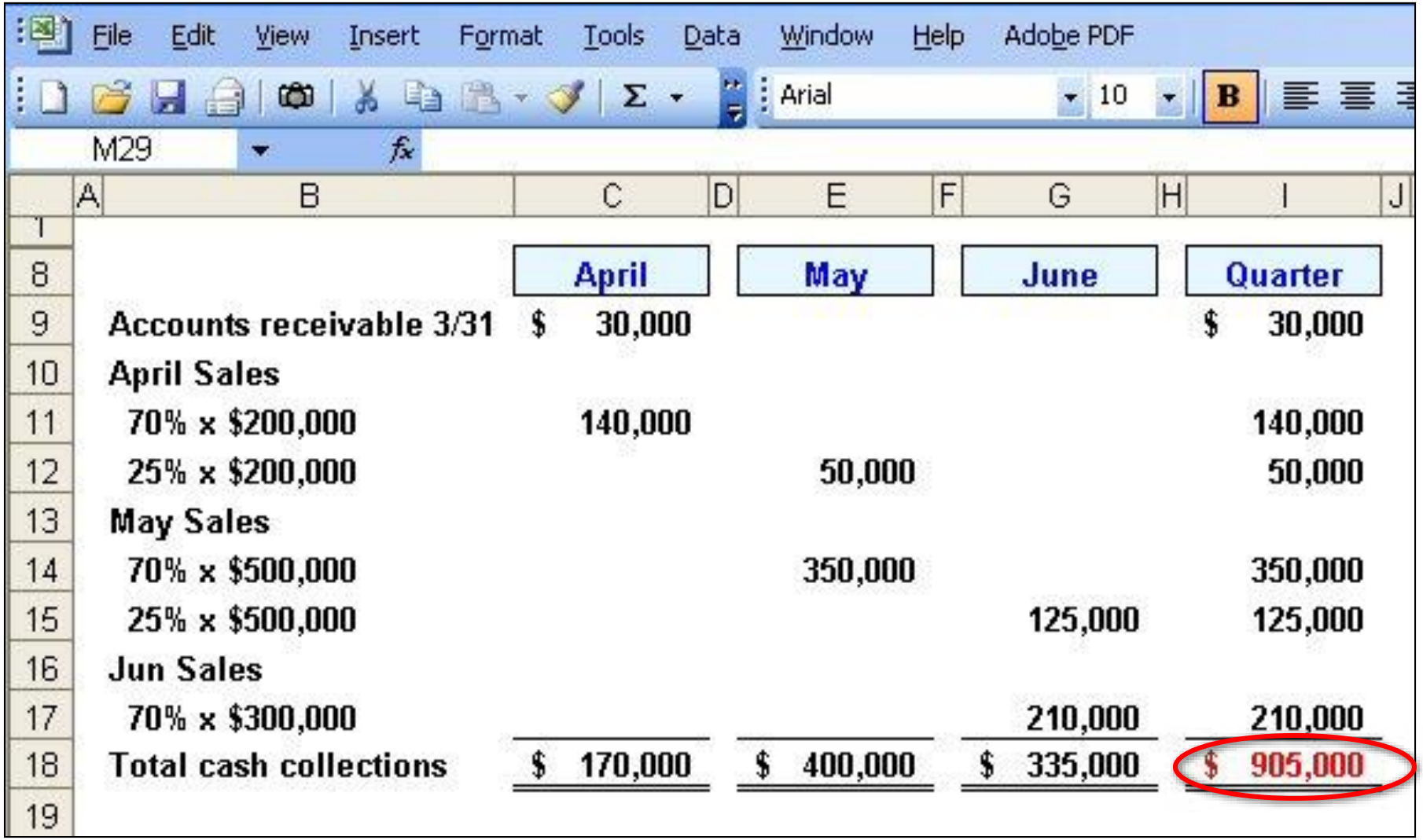
Expected Cash Collections



	April	May	June	Quarter
Accounts receivable 3/31	$ 30,000			$ 30,000
April Sales				
70% x $200,000	140,000			140,000
25% x $200,000		50,000		50,000
May Sales				
70% x $500,000		350,000		350,000
25% x $500,000			125,000	125,000
Total cash collections	$ 170,000	$ 400,000		

From the Sales Budget for May.

Expected Cash Collections



		April	May	June	Quarter
9	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

Royal Company
Budgeted Balance Sheet
June 30

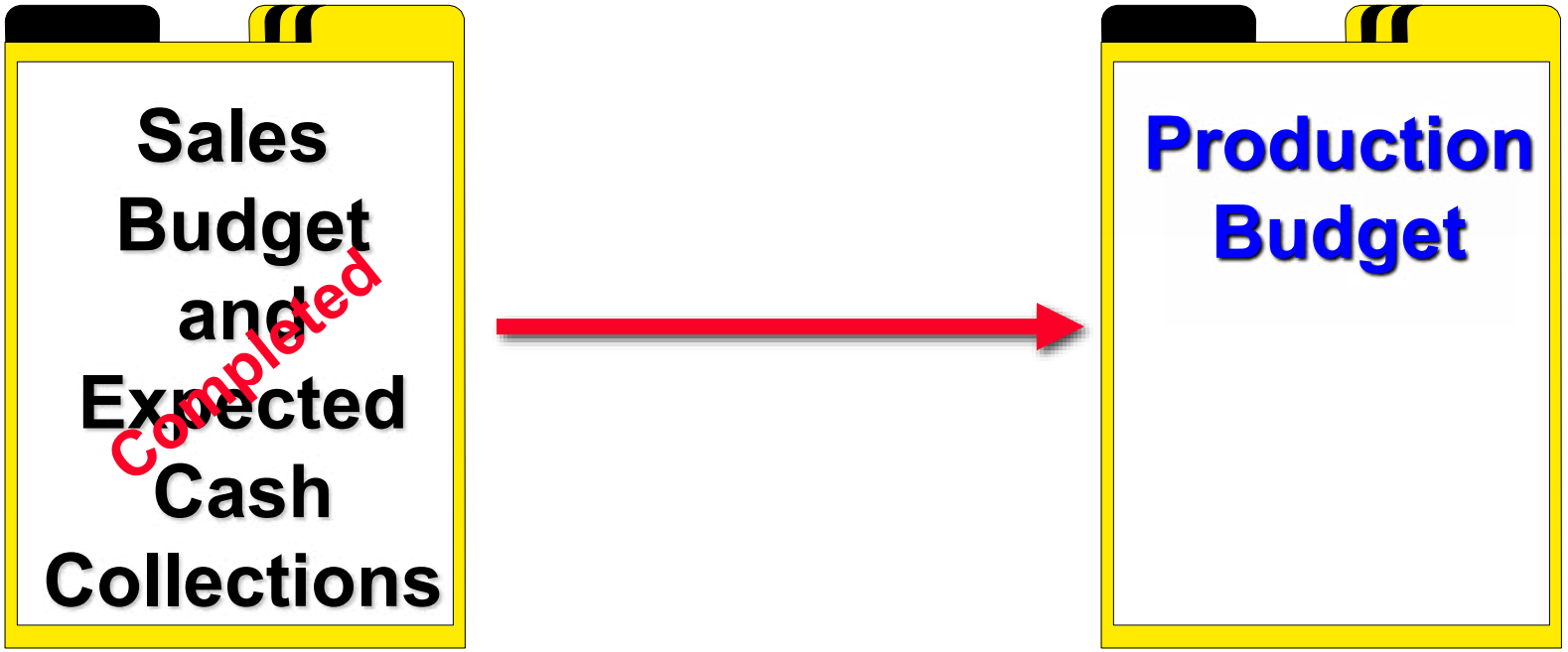
Assets:	
Cash	
Accounts receivable	75,000
Raw materials inventory	
Finished goods inventory	
Land	
Equipment	
Total assets	
Liabilities and Stockholders' Equity	
Accounts payable	
Common stock	
Retained earnings	
Total liabilities and stockholders' equity	

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
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 Production Budget



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

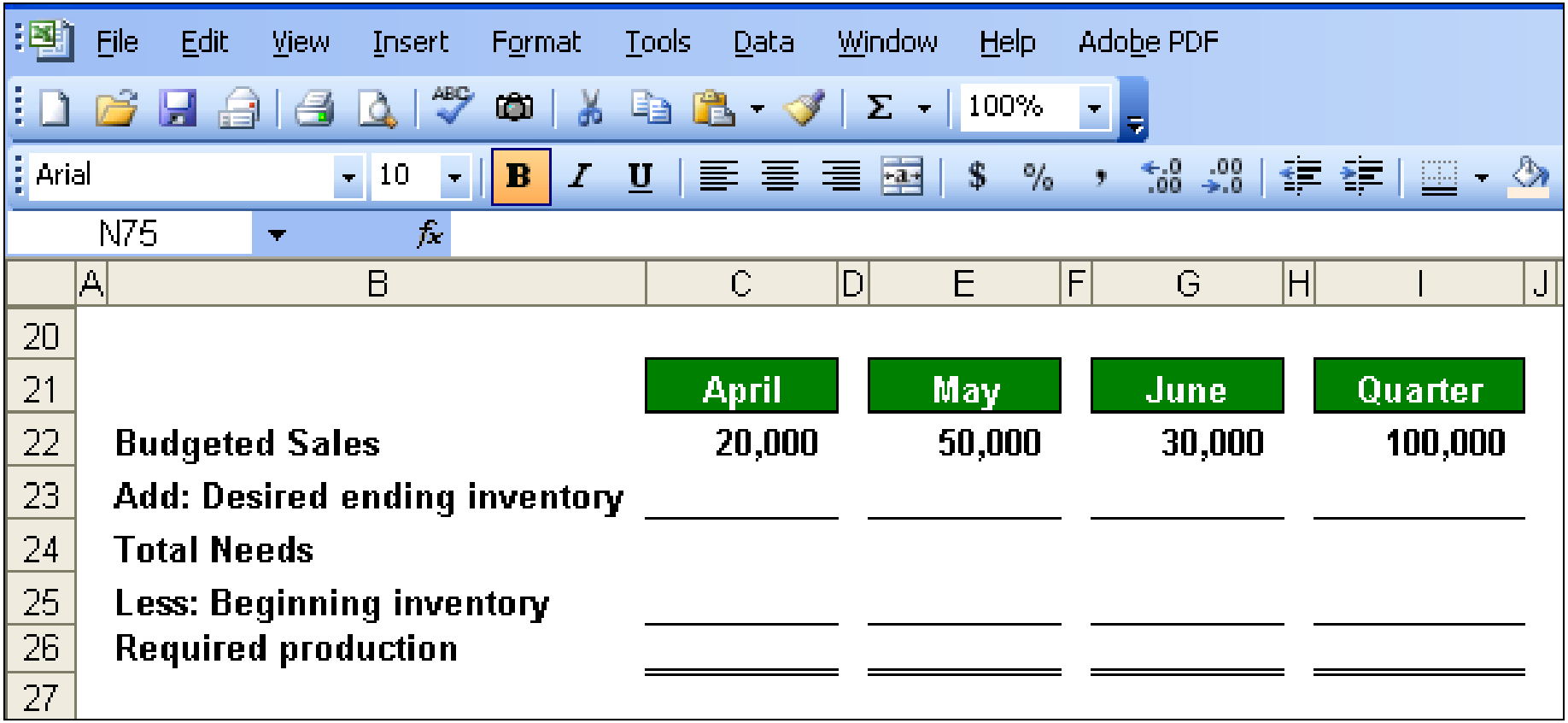
The Production Budget

- 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.

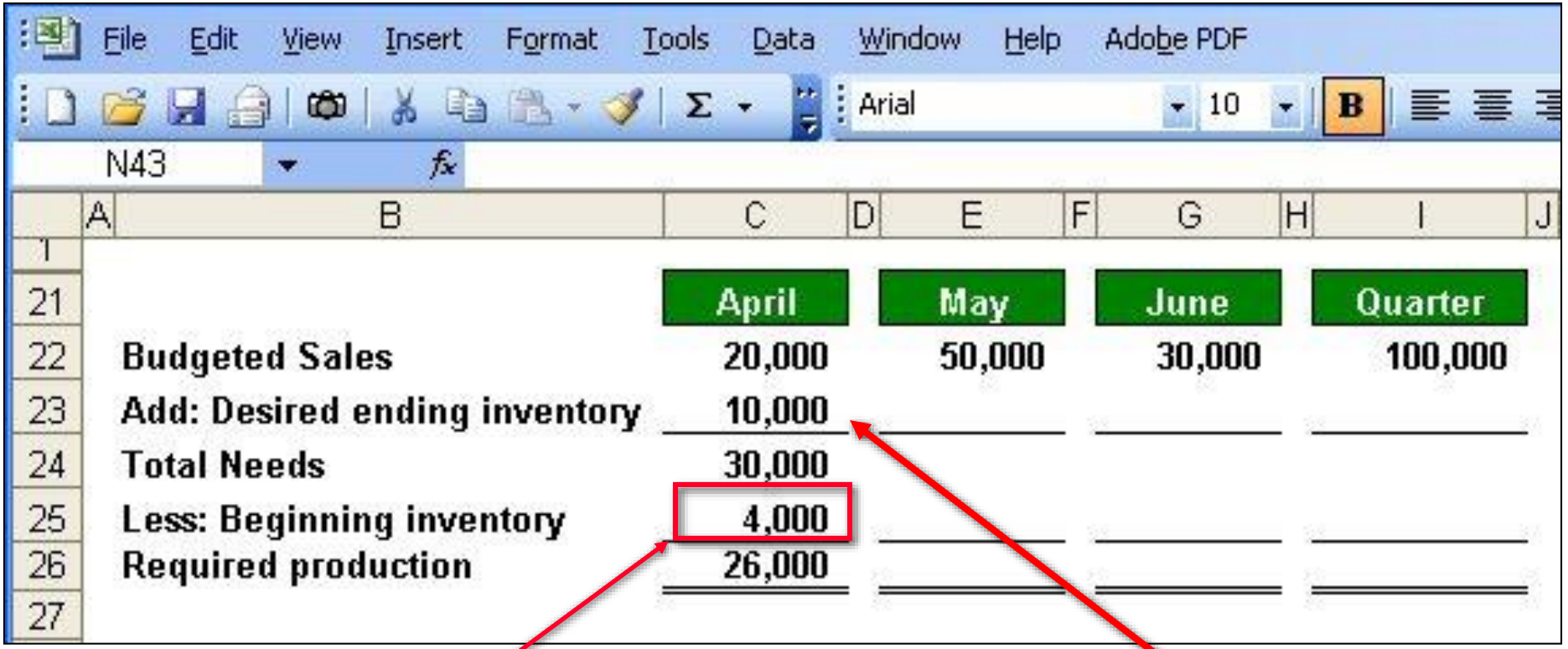
If Royal was a merchandising company it would prepare a merchandise purchase budget instead of a production budget.

The Production Budget



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

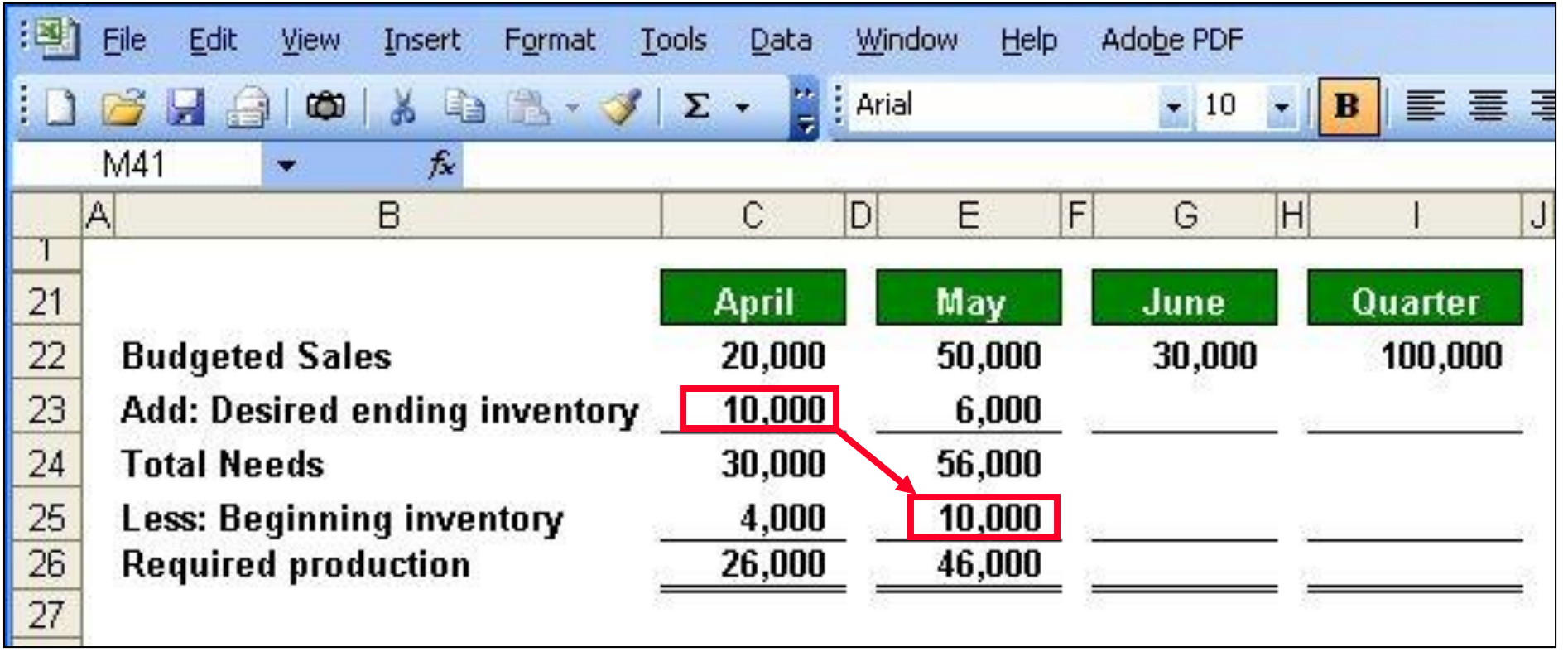
The Production Budget



March 31 ending inventory.

Budgeted May sales	50,000
Desired ending inventory %	20%
Desired ending inventory	10,000

The Production Budget

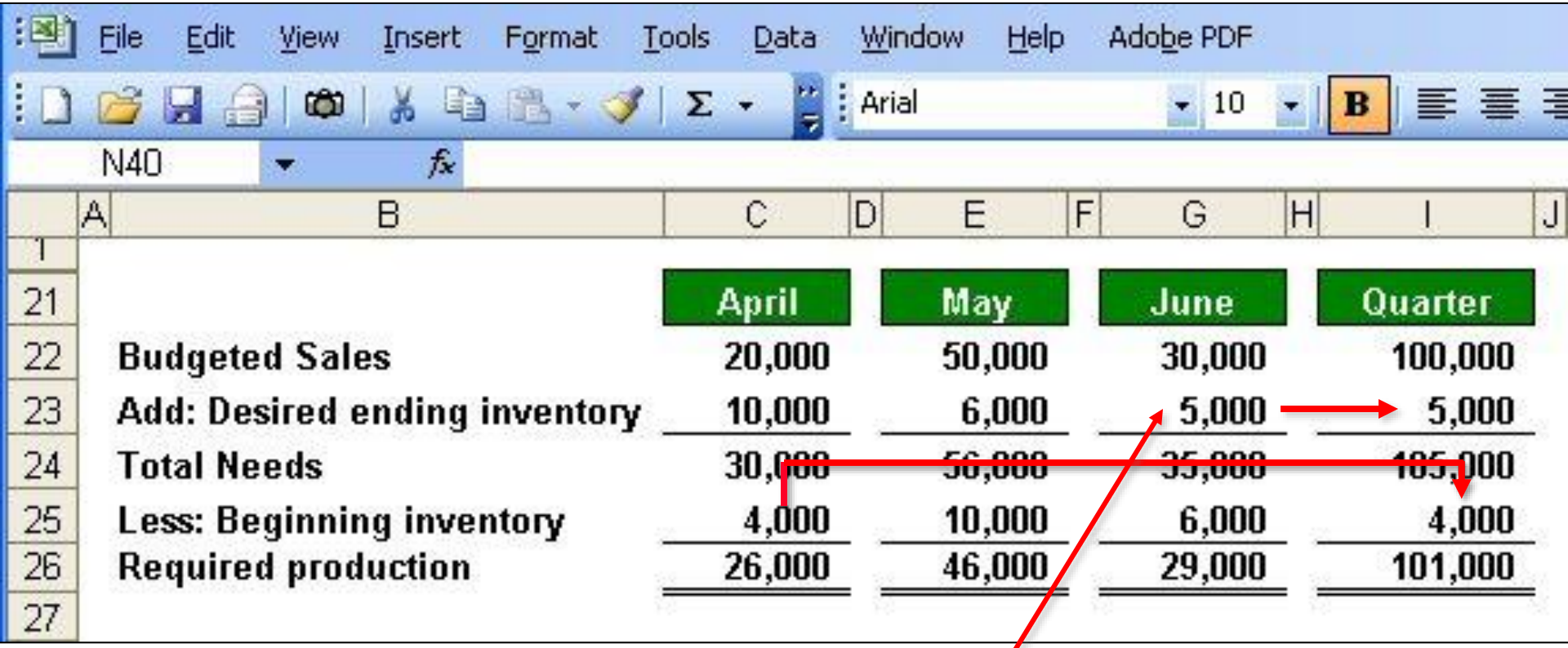


	April	May	June	Quarter
Budgeted Sales	20,000	50,000	30,000	100,000
Add: Desired ending inventory	10,000	6,000		
Total Needs	30,000	56,000		
Less: Beginning inventory	4,000	10,000		
Required production	26,000	46,000		

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 Production Budget



	April	May	June	Quarter
Budgeted Sales	20,000	50,000	30,000	100,000
Add: Desired ending inventory	10,000	6,000	5,000	5,000
Total Needs	30,000	56,000	35,000	105,000
Less: Beginning inventory	4,000	10,000	6,000	4,000
Required production	26,000	46,000	29,000	101,000

Assumed ending inventory
= 10% x 25,000 units

Master Budget Sub-schedules

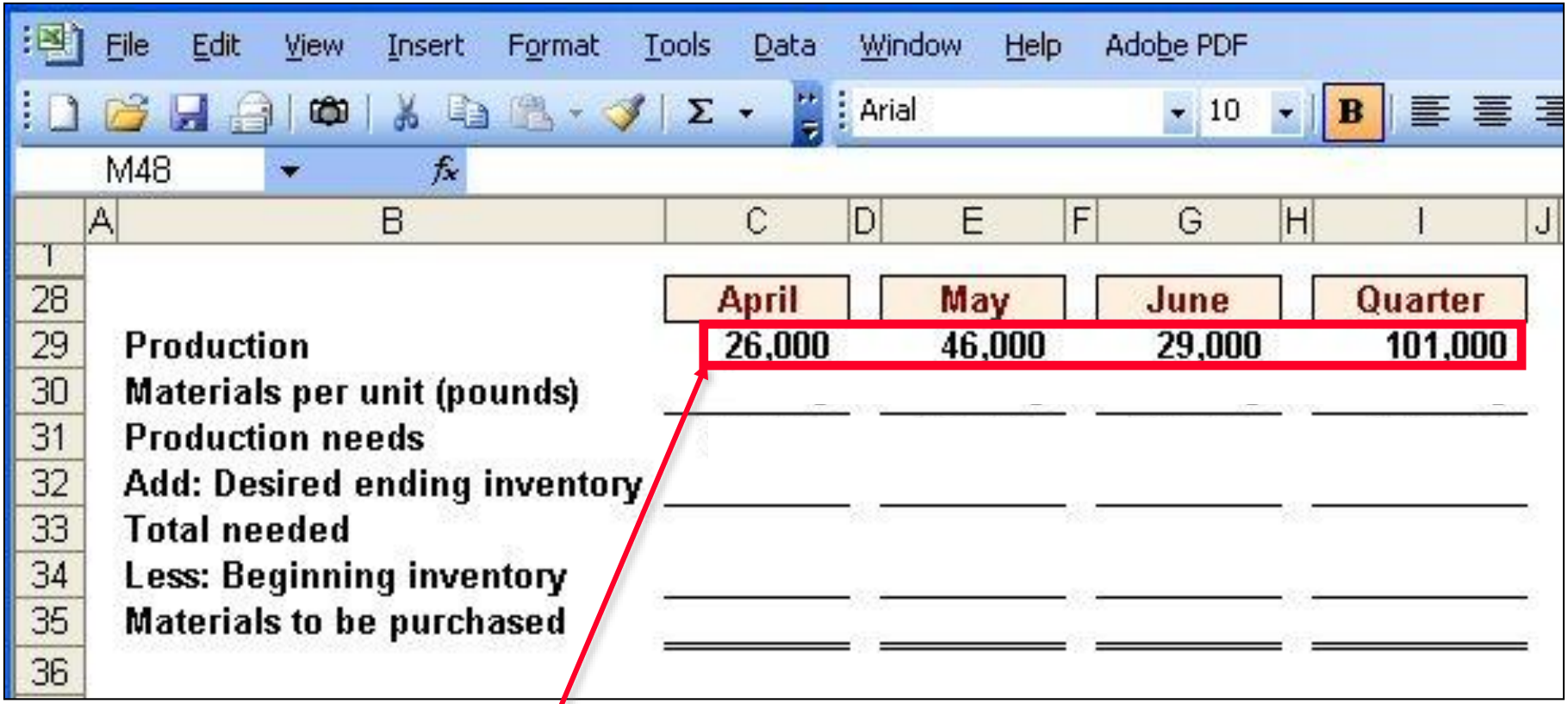
1. Sales budget, including a schedule of expected cash collections
2. Production budget
3. Direct materials budget, including a schedule of expected cash disbursements for purchases of materials
4. Direct labor budget
5. Manufacturing overhead budget
6. Selling and administrative expense budget
7. Cash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

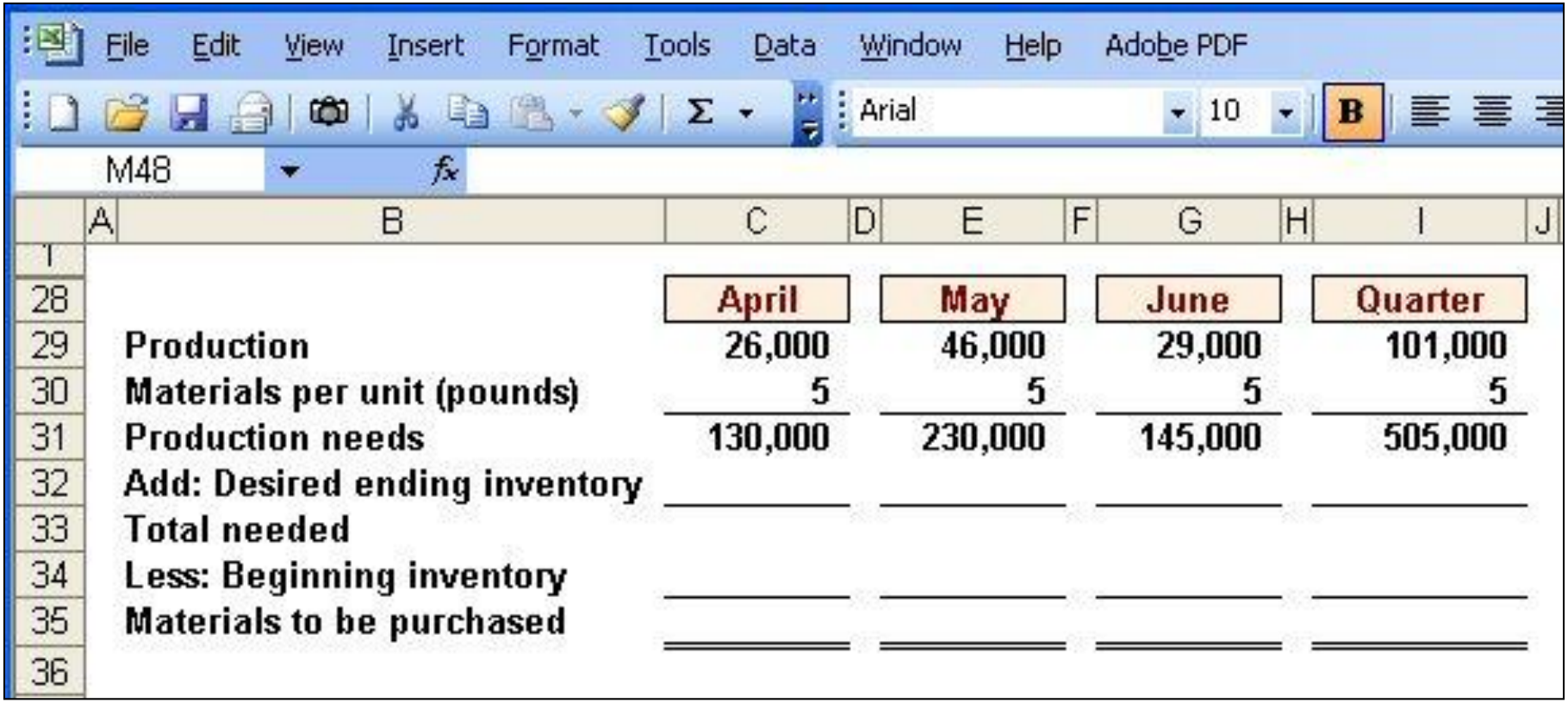
Let's prepare the direct materials budget.

The Direct Materials Budget



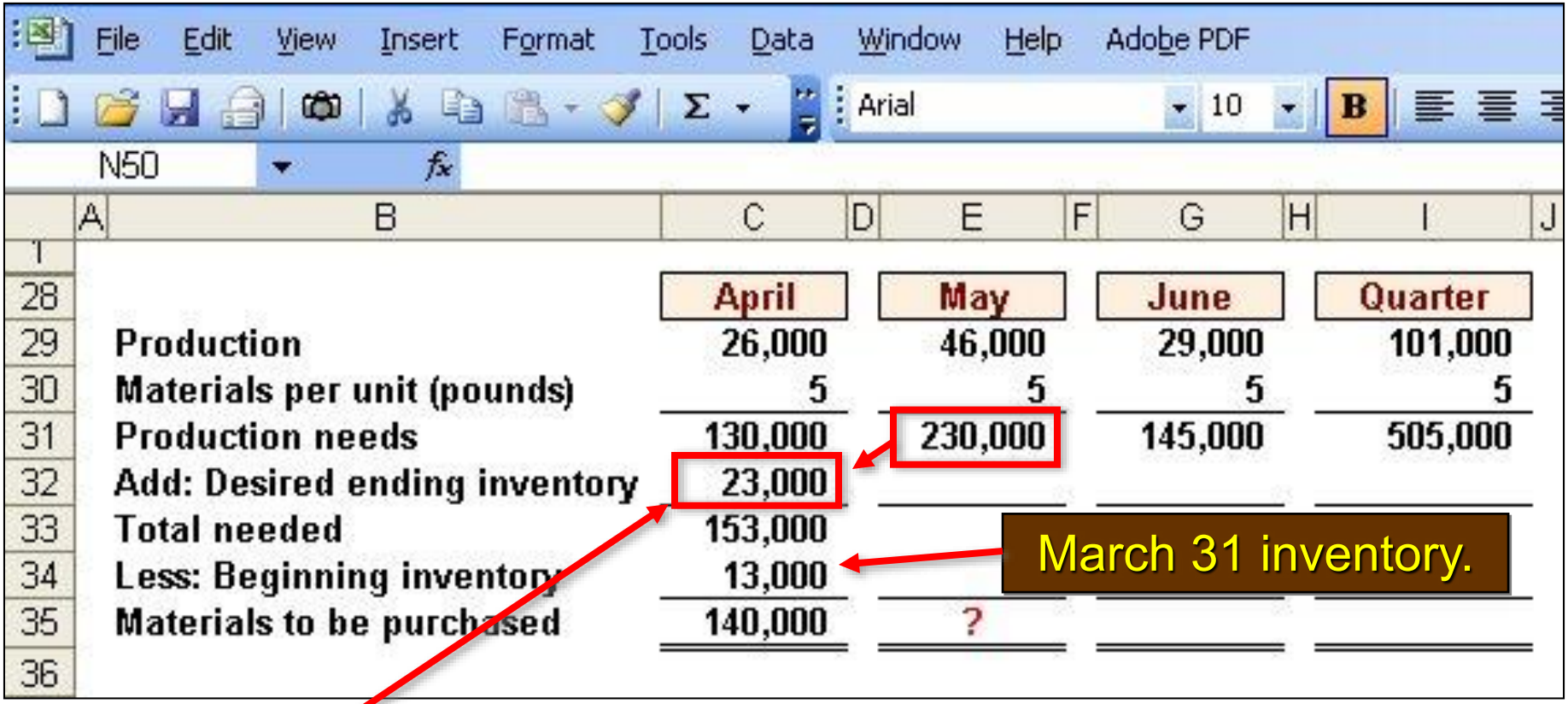
From production budget.

The Direct Materials Budget



	April	May	June	Quarter
Production	26,000	46,000	29,000	101,000
Materials per unit (pounds)	5	5	5	5
Production needs	130,000	230,000	145,000	505,000
Add: Desired ending inventory				
Total needed				
Less: Beginning inventory				
Materials to be purchased				

The Direct Materials Budget

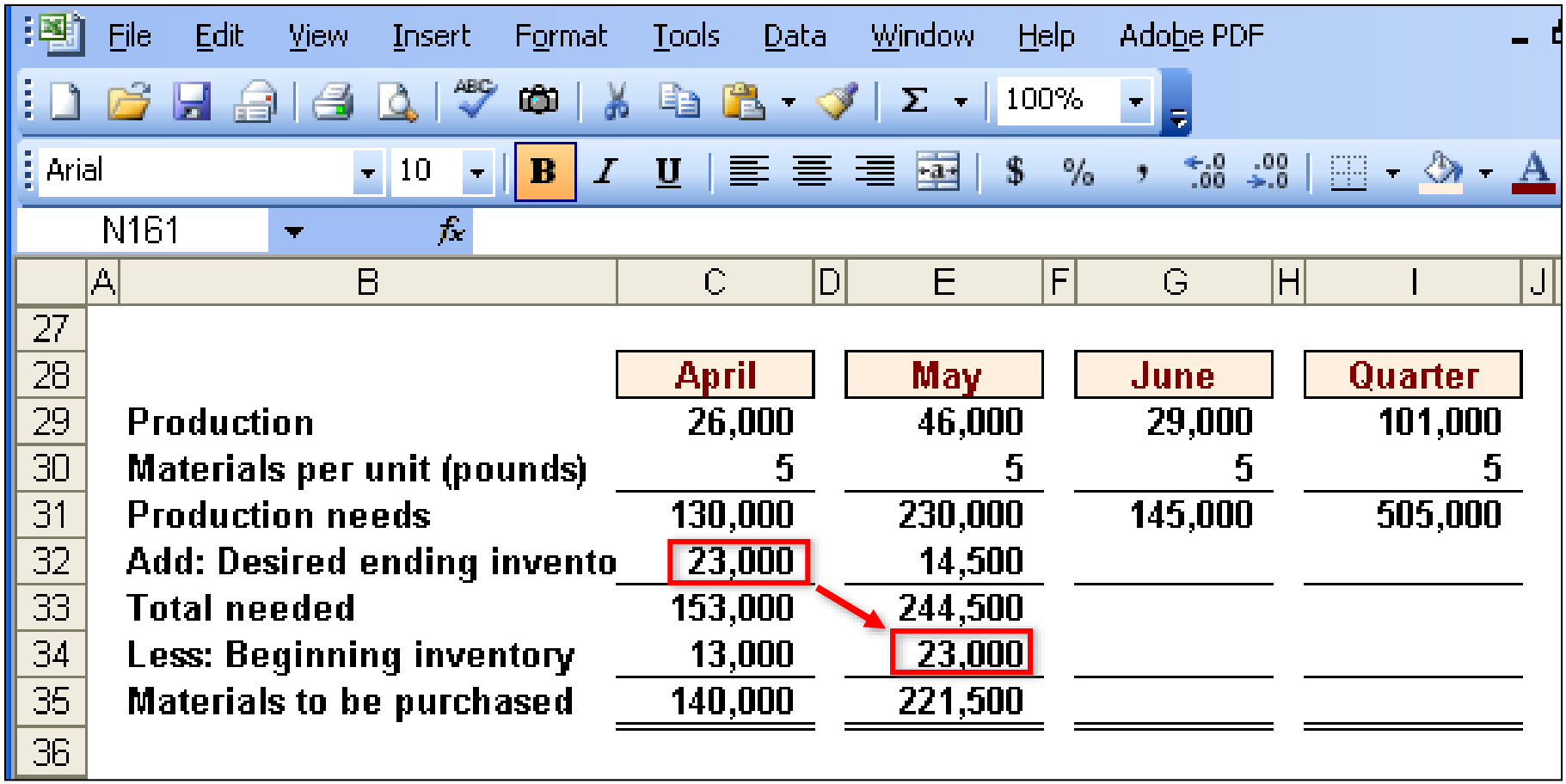


March 31 inventory.

10% of following month's production needs.

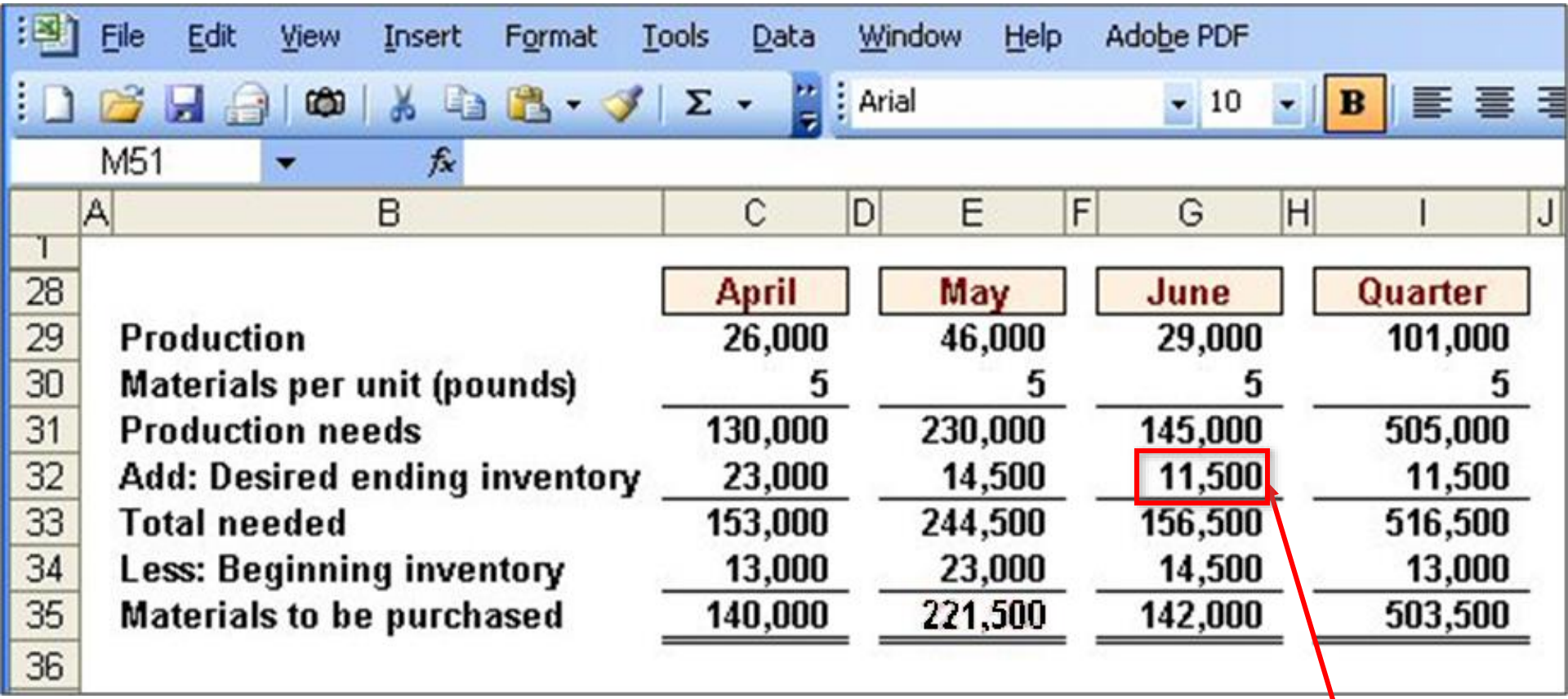
Calculate the materials to be purchased in May.

The Direct Materials Budget



	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 invento	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



	April	May	June	Quarter
Production	26,000	46,000	29,000	101,000
Materials per unit (pounds)	5	5	5	5
Production needs	130,000	230,000	145,000	505,000
Add: Desired ending inventory	23,000	14,500	11,500	11,500
Total needed	153,000	244,500	156,500	516,500
Less: Beginning inventory	13,000	23,000	14,500	13,000
Materials to be purchased	140,000	221,500	142,000	503,500

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.

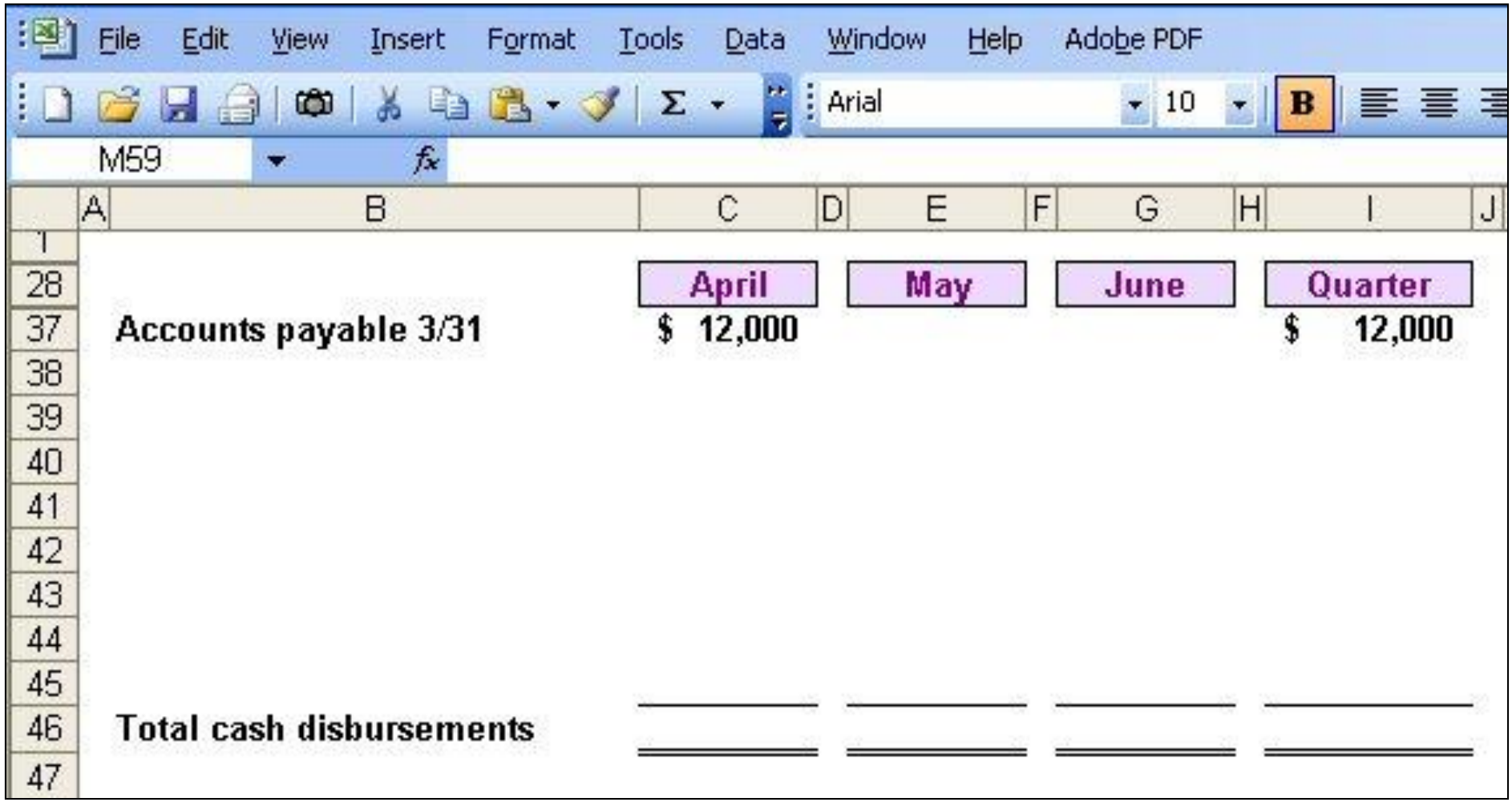
Let's calculate expected cash disbursements.

Royal Company
Budgeted Balance Sheet
June 30

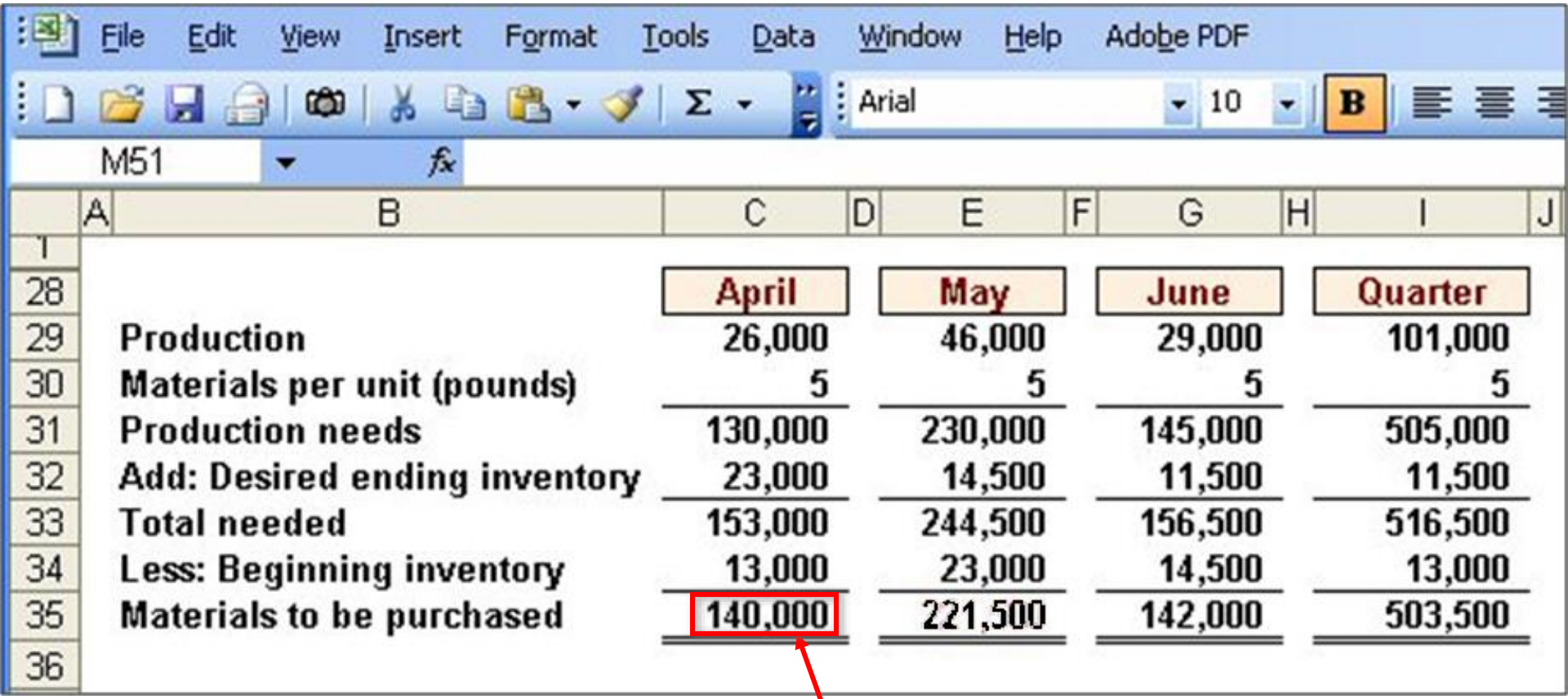
Assets:	
Cash	
Accounts receivable	75,000
Raw materials inventory	4,600
Finished goods inventory	
Land	
Equipment	
Total assets	
Liabilities and Stockholders' Equity	
Accounts payable	
Common stock	
Retained earnings	
Total liabilities and stockholders' equity	

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

Expected Cash Disbursement for Materials



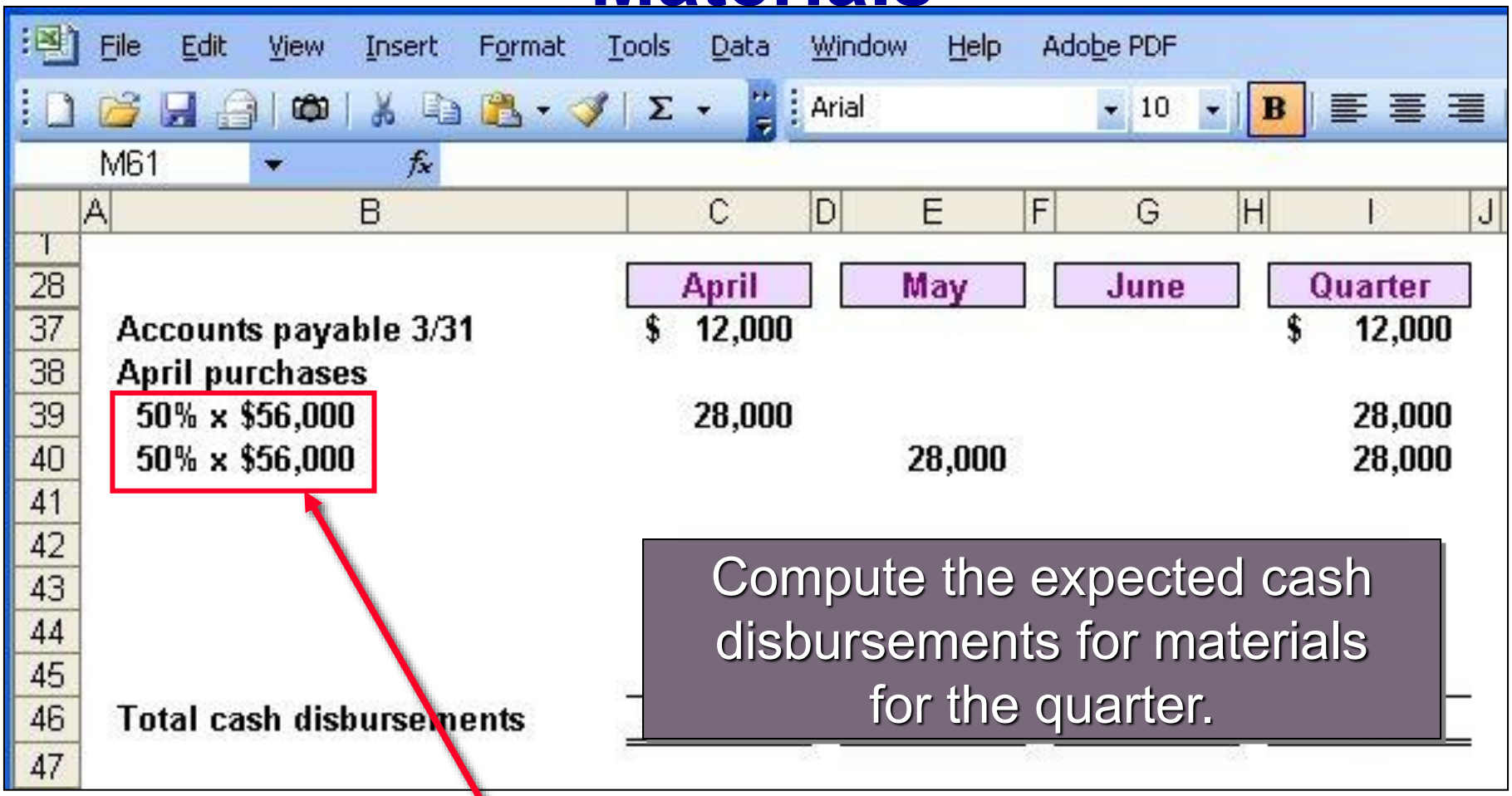
The Direct Materials Budget



	April	May	June	Quarter
Production	26,000	46,000	29,000	101,000
Materials per unit (pounds)	5	5	5	5
Production needs	130,000	230,000	145,000	505,000
Add: Desired ending inventory	23,000	14,500	11,500	11,500
Total needed	153,000	244,500	156,500	516,500
Less: Beginning inventory	13,000	23,000	14,500	13,000
Materials to be purchased	140,000	221,500	142,000	503,500

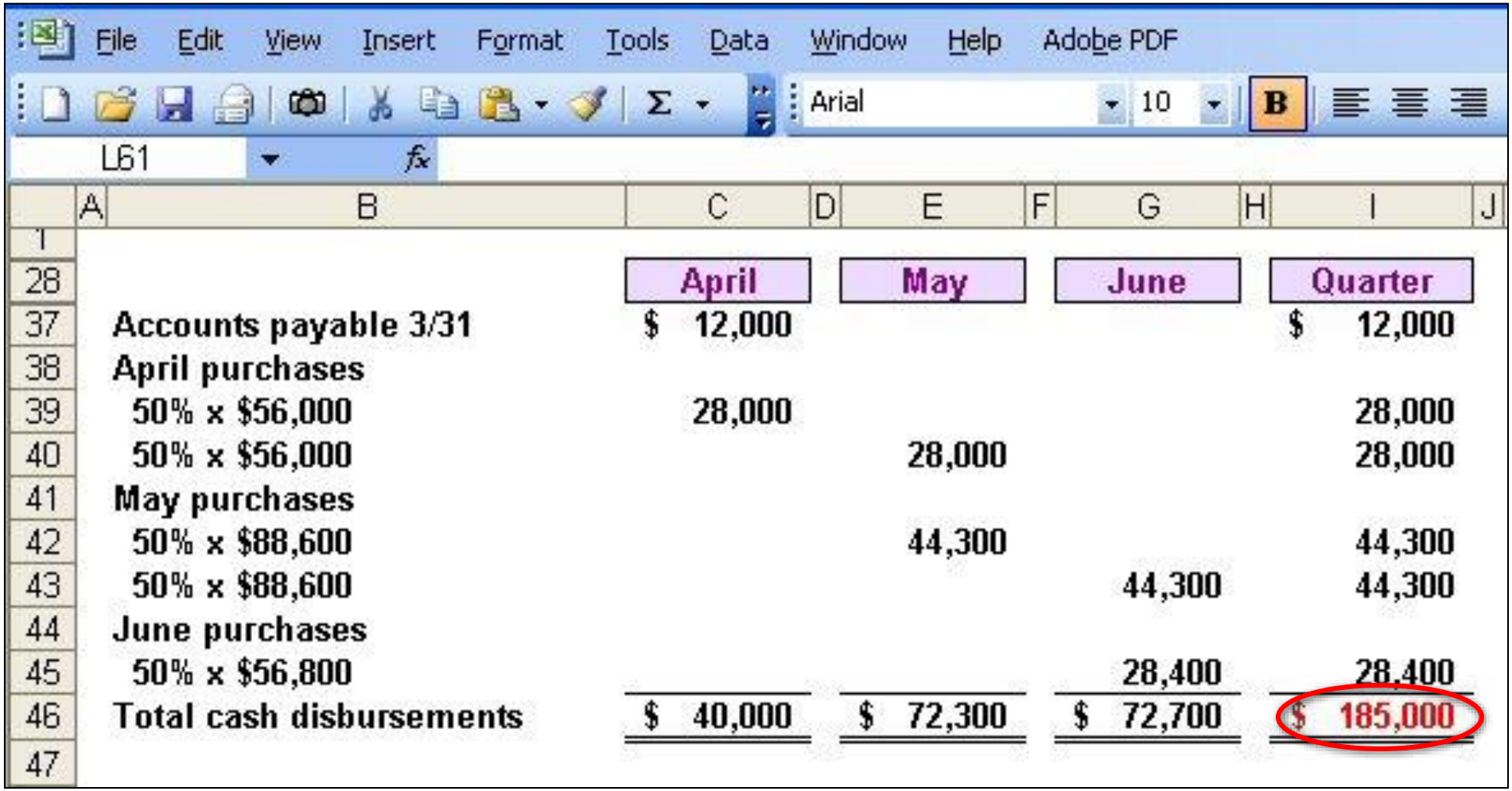
Material (in pounds) to be purchased in April

Expected Cash Disbursement for Materials



140,000 lbs. × $0.40/lb. = $56,000

Expected Cash Disbursement for Materials



	April	May	June	Quarter
Accounts payable 3/31	$ 12,000			$ 12,000
April purchases				
50% x $56,000	28,000			28,000
50% x $56,000		28,000		28,000
May purchases				
50% x $88,600		44,300		44,300
50% x $88,600			44,300	44,300
June purchases				
50% x $56,800			28,400	28,400
Total cash disbursements	$ 40,000	$ 72,300	$ 72,700	$ 185,000

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

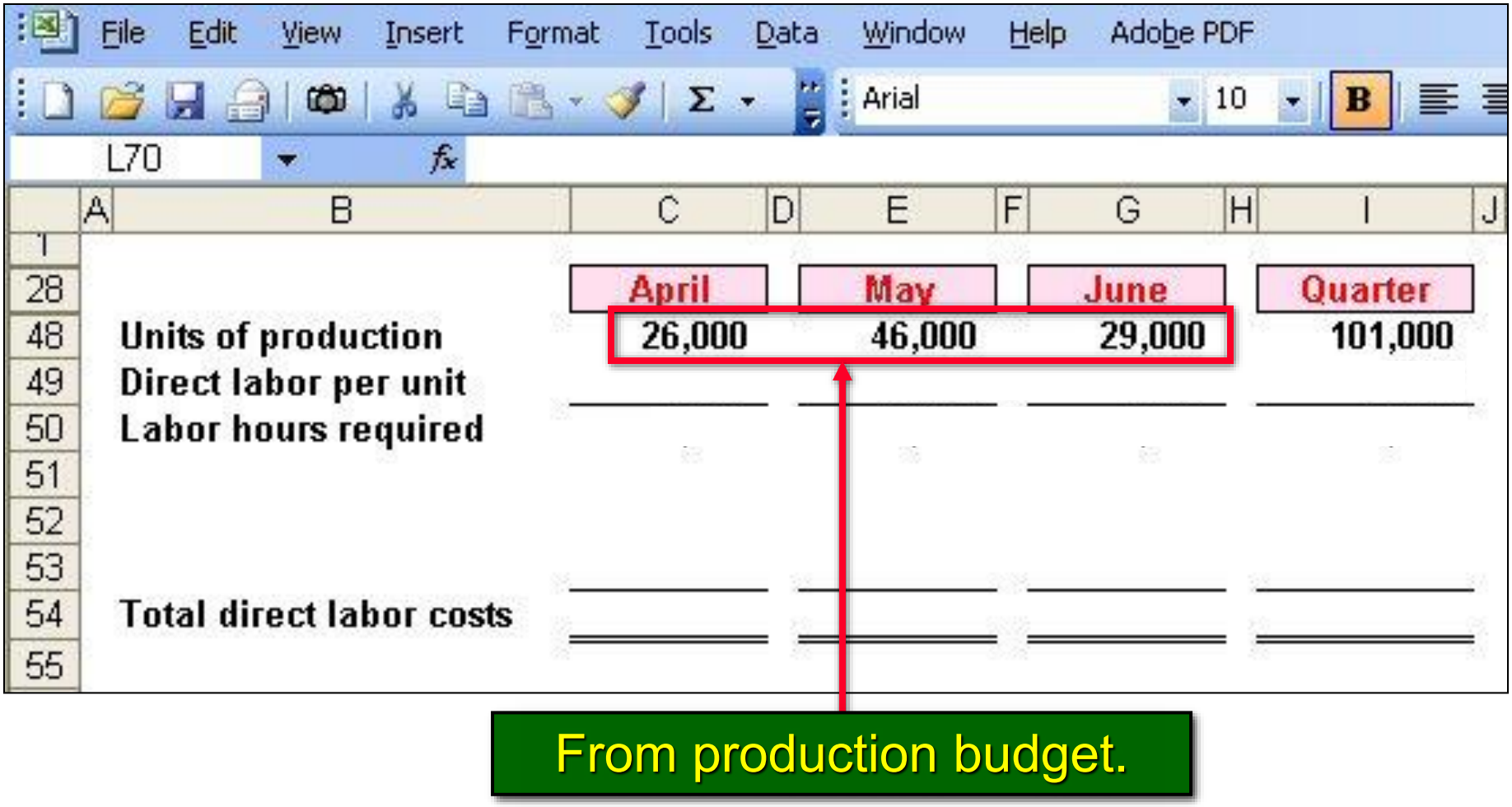
1. Sales budget, including a schedule of expected cash collections
2. Production budget
3. Direct materials budget, including a schedule of expected cash disbursements for purchases of materials
4. Direct labor budget
5. Manufacturing overhead budget
6. Selling and administrative expense budget
7. Cash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

The Direct Labor Budget

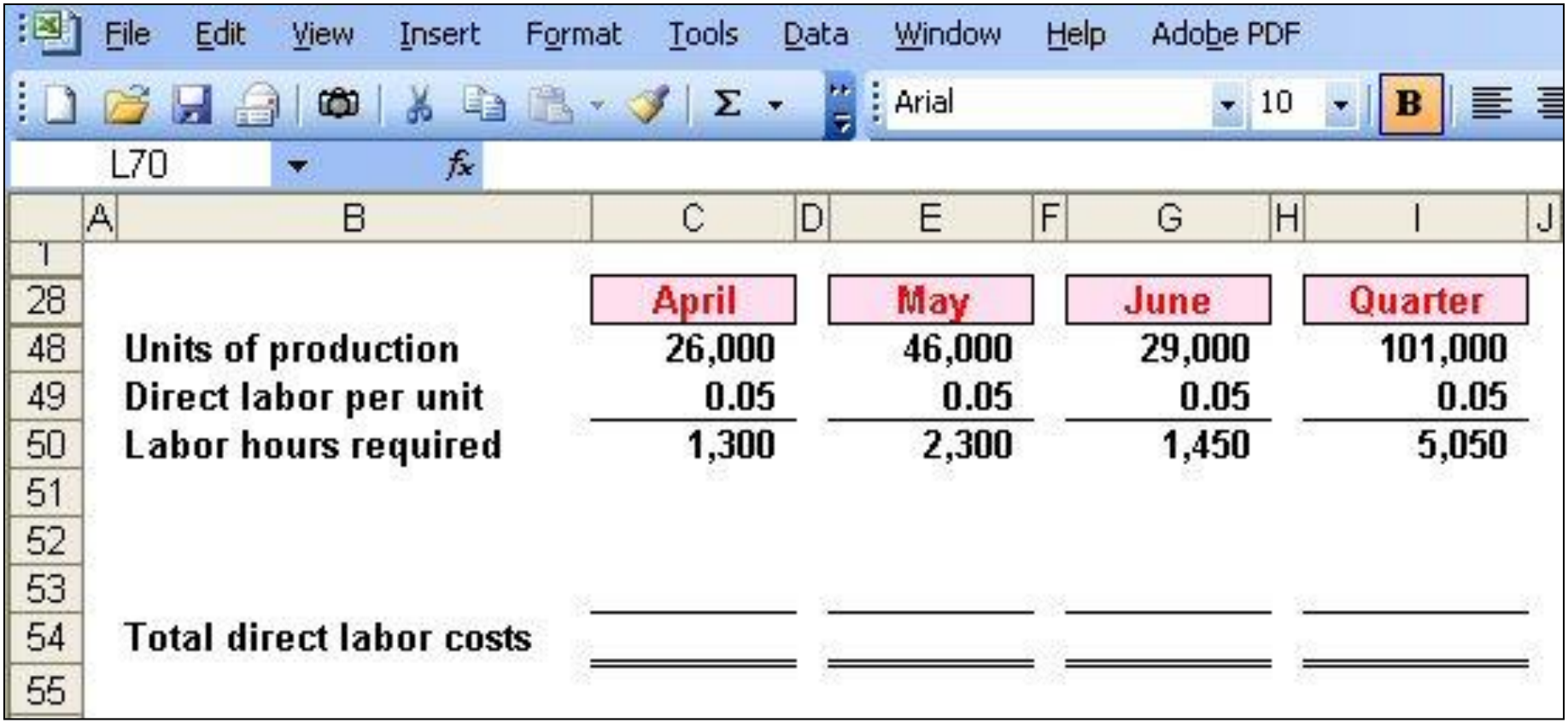
- At Royal, each unit of product requires *0.05* hours (3 minutes) of direct labor.
- The Company has a "no layoff" policy so all employees will be paid for 40 hours of work each week.
- For purposes of our illustration assume that Royal has a "no layoff" policy, workers are paid at the rate of $10 per 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

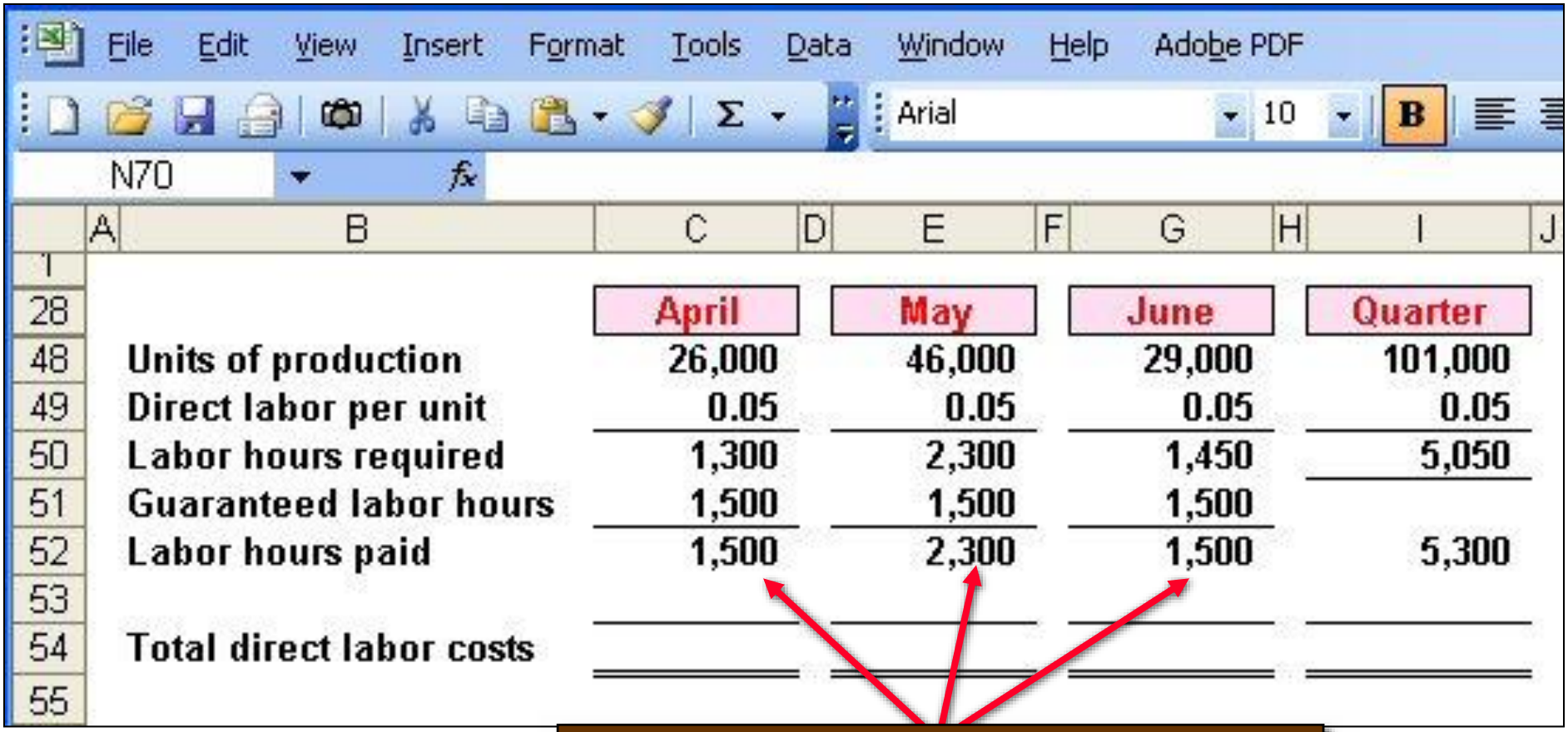


The Direct Labor Budget



	April	May	June	Quarter
Units of production	26,000	46,000	29,000	101,000
Direct labor per unit	0.05	0.05	0.05	0.05
Labor hours required	1,300	2,300	1,450	5,050
Total direct labor costs				

The Direct Labor Budget



File Edit View Insert Format Tools Data Window Help Adobe PDF

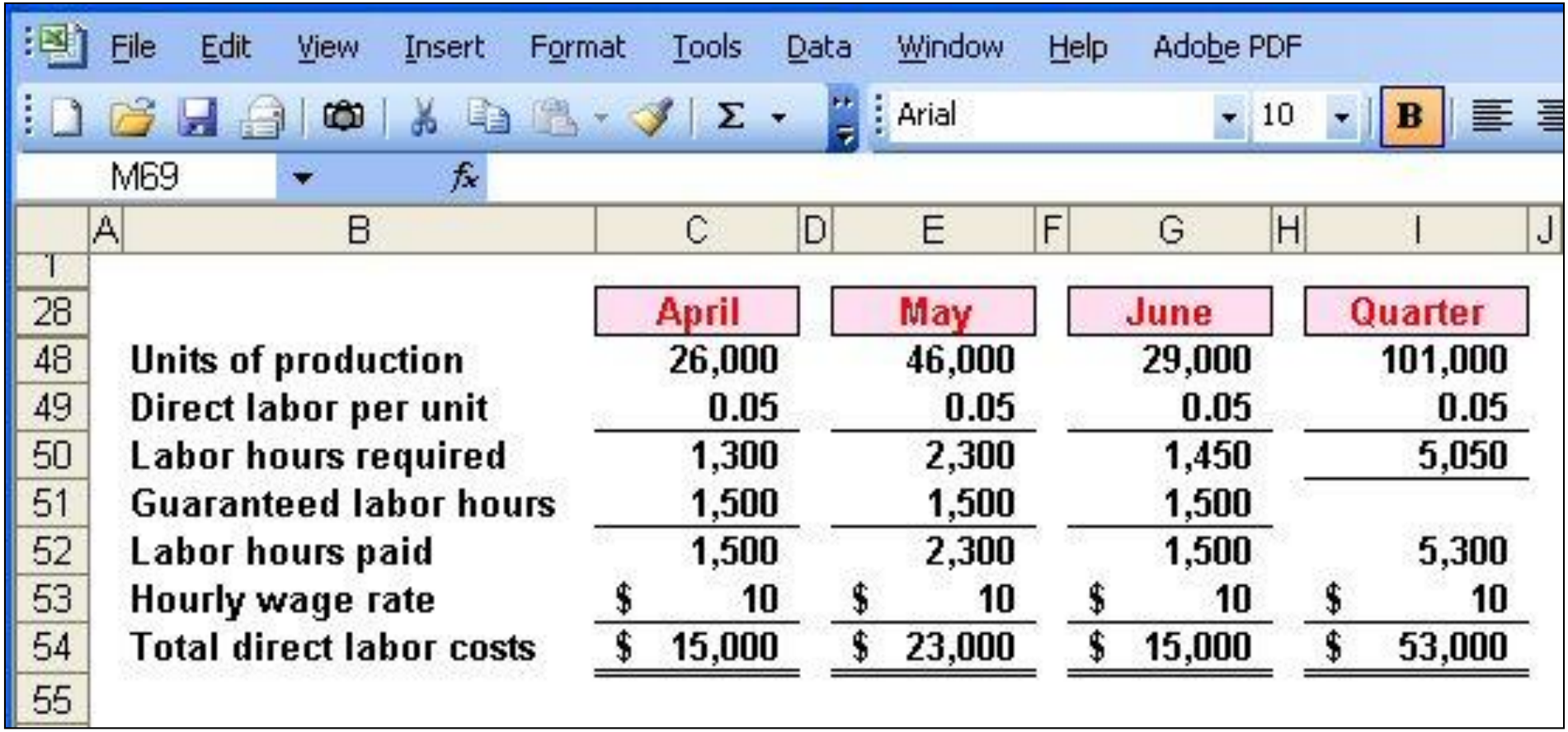
Arial 10 B

N70 fx

	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										
54		Total direct labor costs								
55										

Greater of labor hours required or labor hours guaranteed.

The Direct Labor Budget



	April	May	June	Quarter
Units of production	26,000	46,000	29,000	101,000
Direct labor per unit	0.05	0.05	0.05	0.05
Labor hours required	1,300	2,300	1,450	5,050
Guaranteed labor hours	1,500	1,500	1,500	
Labor hours paid	1,500	2,300	1,500	5,300
Hourly wage rate	$ 10	$ 10	$ 10	$ 10
Total direct labor costs	$ 15,000	$ 23,000	$ 15,000	$ 53,000

Master Budget Sub-schedules

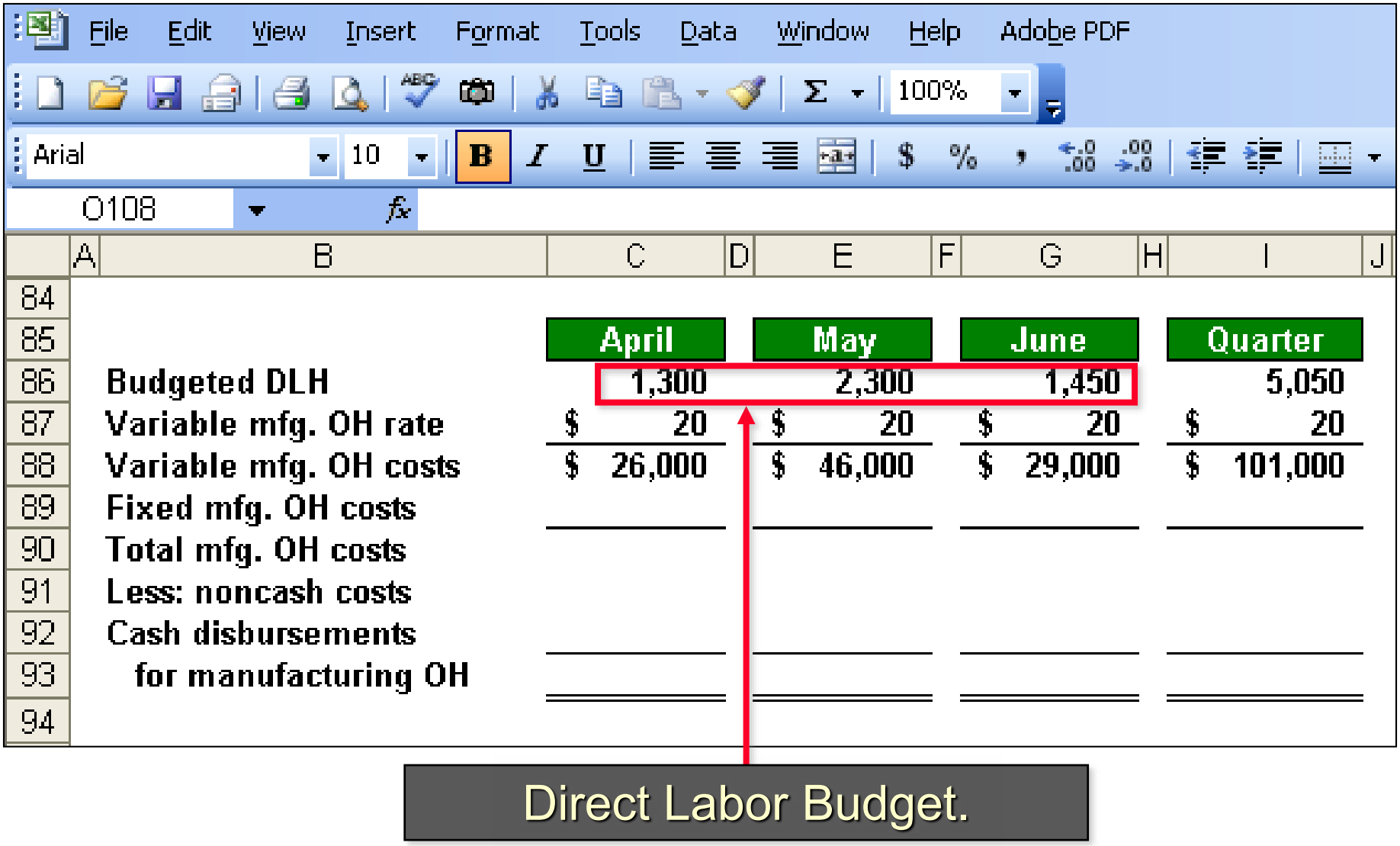
1. Sales budget, including a schedule of expected cash collections
2. Production budget
3. Direct materials budget, including a schedule of expected cash disbursements for purchases of materials
4. Direct labor budget
5. Manufacturing overhead budget
6. Selling and administrative expense budget
7. Cash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

Manufacturing Overhead Budget

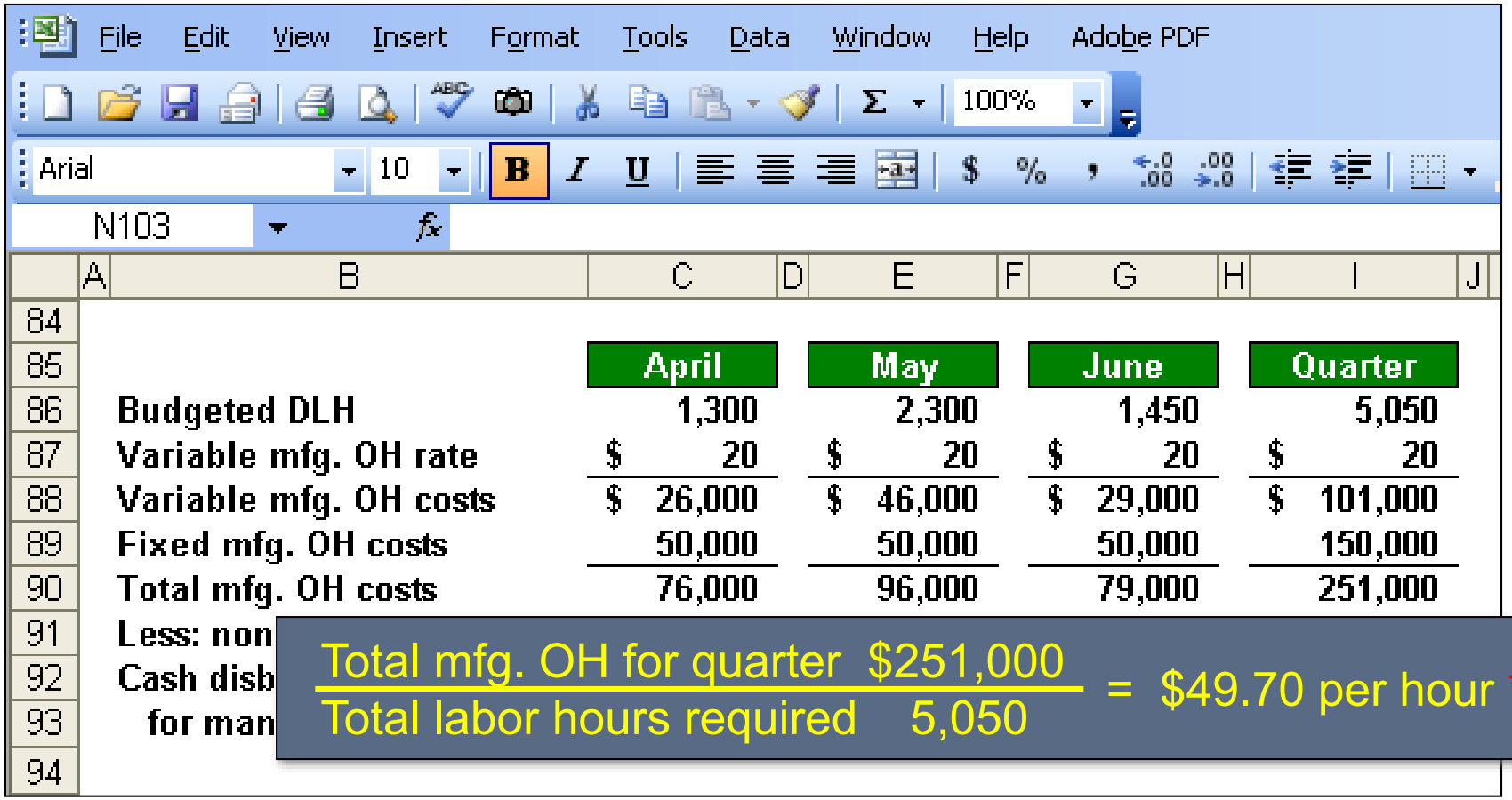
- At Royal, manufacturing overhead is applied to units of product on the basis of direct labor hours.
- The **variable** manufacturing overhead rate is **$20 per direct labor hour**.
- Fixed manufacturing overhead is **$50,000** per month, which includes **$20,000 of noncash costs** (primarily depreciation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

Let's prepare the manufacturing overhead budget.

Manufacturing Overhead Budget



Manufacturing Overhead Budget

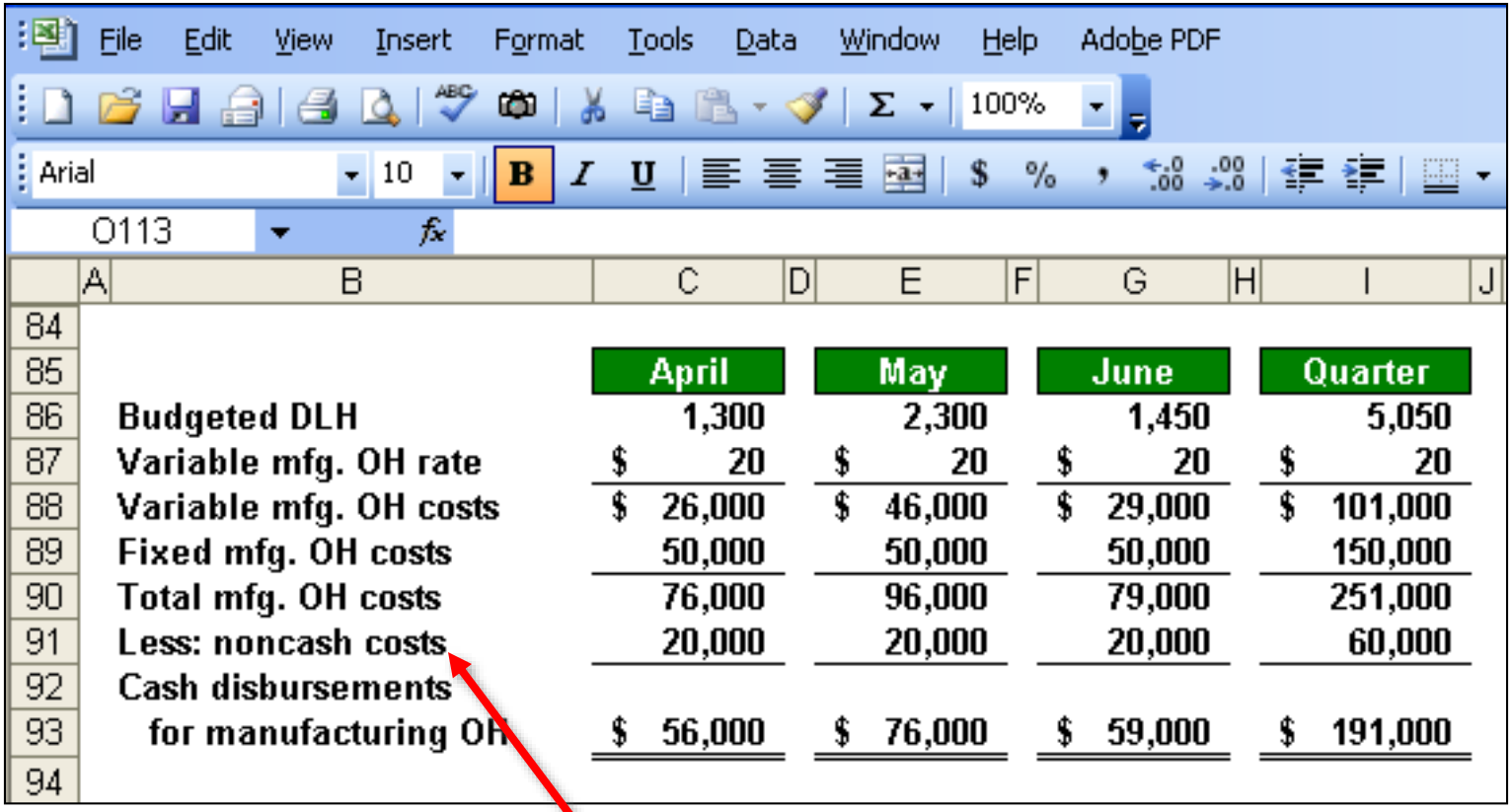


	A	B	C	D	E	F	G	H	I	J
84										
85			April		May		June		Quarter	
86		Budgeted DLH	1,300		2,300		1,450		5,050	
87		Variable mfg. OH rate	$ 20		$ 20		$ 20		$ 20	
88		Variable mfg. OH costs	$ 26,000		$ 46,000		$ 29,000		$ 101,000	
89		Fixed mfg. OH costs	50,000		50,000		50,000		150,000	
90		Total mfg. OH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

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

*** rounded**

Manufacturing Overhead Budget



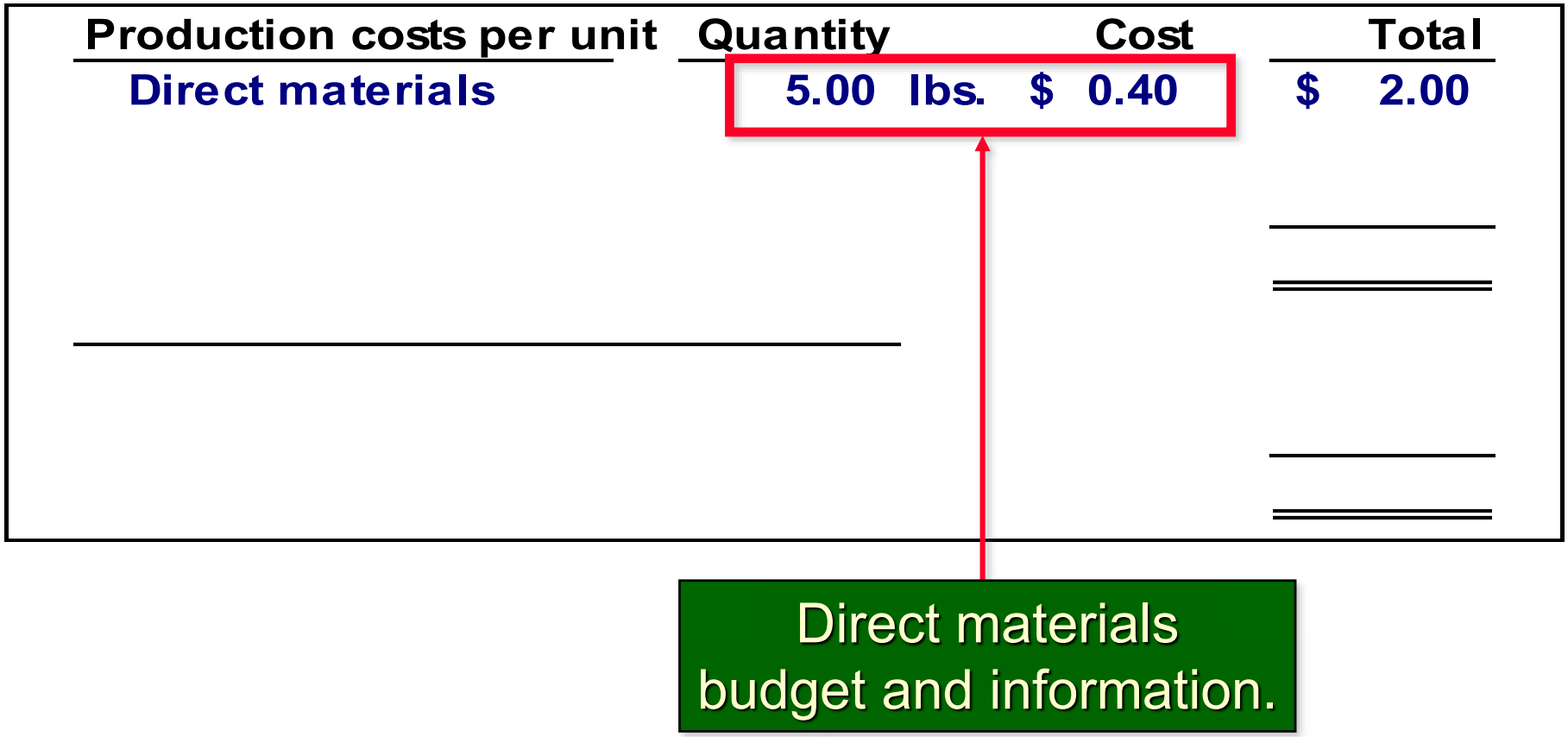
	April	May	June	Quarter
Budgeted DLH	1,300	2,300	1,450	5,050
Variable mfg. OH rate	$ 20	$ 20	$ 20	$ 20
Variable mfg. OH costs	$ 26,000	$ 46,000	$ 29,000	$ 101,000
Fixed mfg. OH costs	50,000	50,000	50,000	150,000
Total mfg. OH costs	76,000	96,000	79,000	251,000
Less: noncash costs	20,000	20,000	20,000	60,000
Cash disbursements for manufacturing OH	$ 56,000	$ 76,000	$ 59,000	$ 191,000

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



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

Production costs per unit	Quantity	Cost	Total
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

Production costs per unit	Quantity		Cost	Total
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				
Unit product cost				$ 4.99
Ending finished goods inventory				?

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

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

Production costs per unit	Quantity		Cost	Total
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

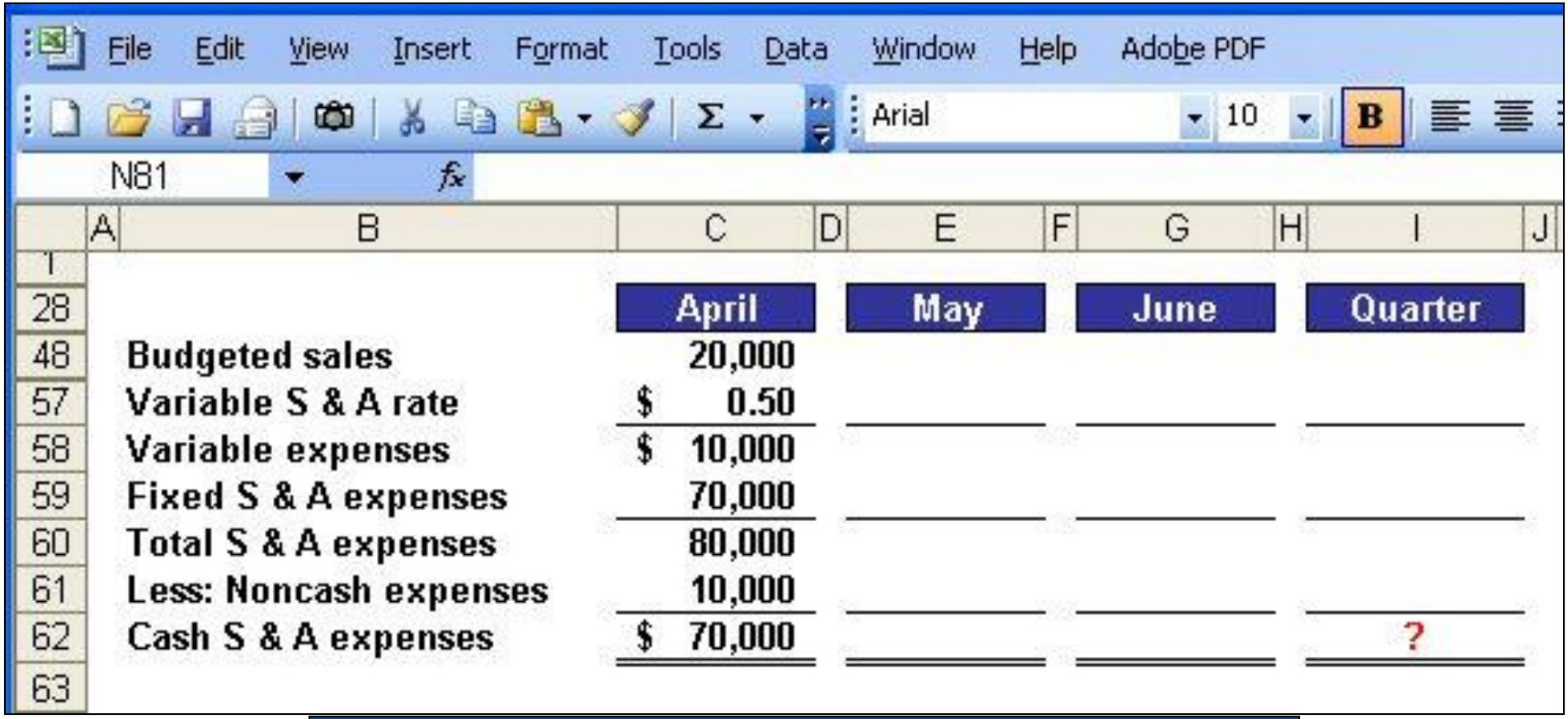
1. Sales budget, including a schedule of expected cash collections
2. Production budget
3. Direct materials budget, including a schedule of expected cash disbursements for purchases of materials
4. Direct labor budget
5. Manufacturing overhead budget
6. Selling and administrative expense budget
7. Cash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

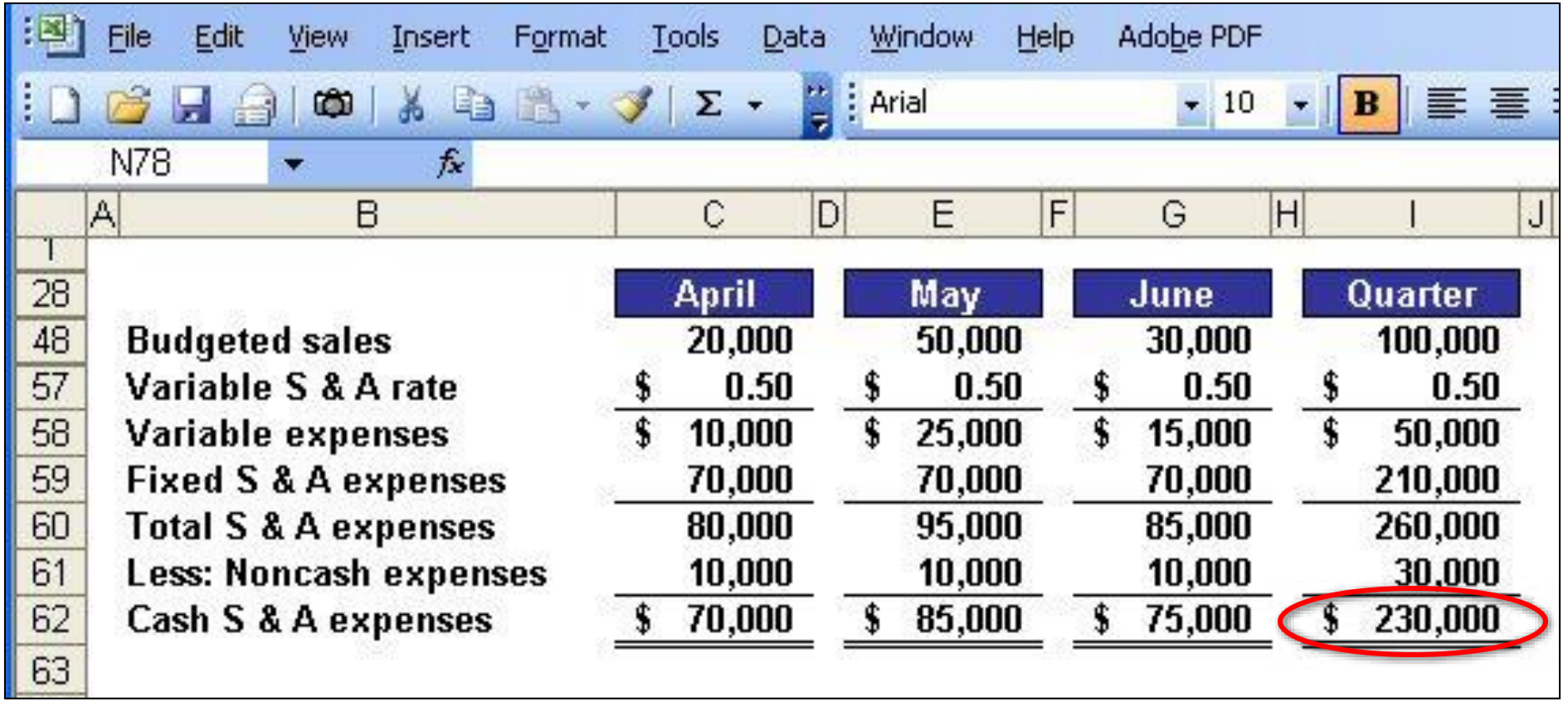
Let's prepare the company's selling and administrative expense budget.

Selling and Administrative Expense Budget



Calculate the selling and administrative cash expenses for the quarter.

Selling Administrative Expense Budget



File Edit View Insert Format Tools Data Window Help Adobe PDF

Arial 10 B

N78

	April	May	June	Quarter
Budgeted sales	20,000	50,000	30,000	100,000
Variable S & A rate	$ 0.50	$ 0.50	$ 0.50	$ 0.50
Variable expenses	$ 10,000	$ 25,000	$ 15,000	$ 50,000
Fixed S & A expenses	70,000	70,000	70,000	210,000
Total S & A expenses	80,000	95,000	85,000	260,000
Less: Noncash expenses	10,000	10,000	10,000	30,000
Cash S & A expenses	$ 70,000	$ 85,000	$ 75,000	$ 230,000

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:

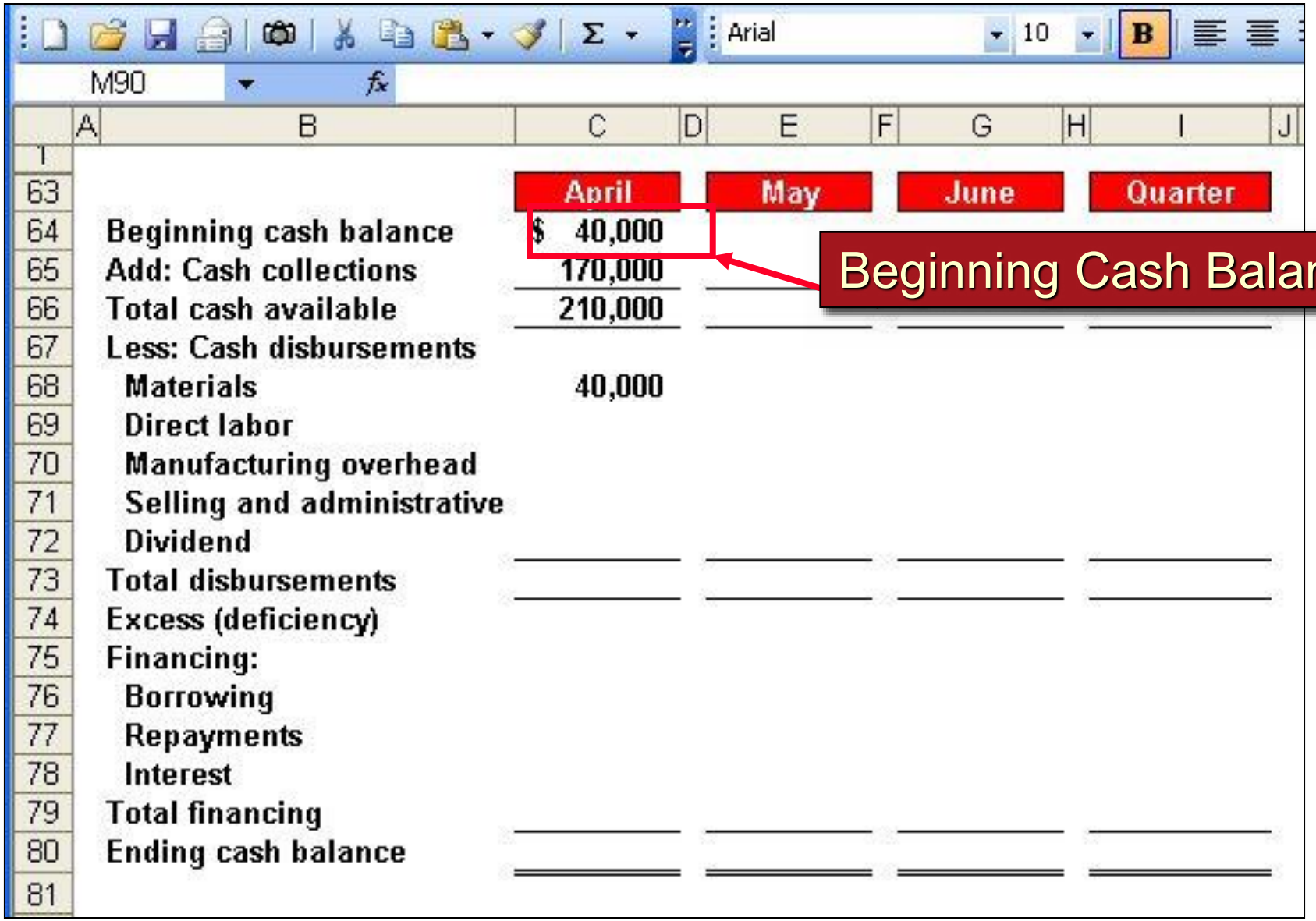
1. Cash receipts section lists all cash inflows excluding cash received from financing;
2. Cash disbursements section consists of all cash payments excluding repayments of principal and interest;
3. Cash excess or deficiency section determines if the company will need to borrow money or if it will be 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.

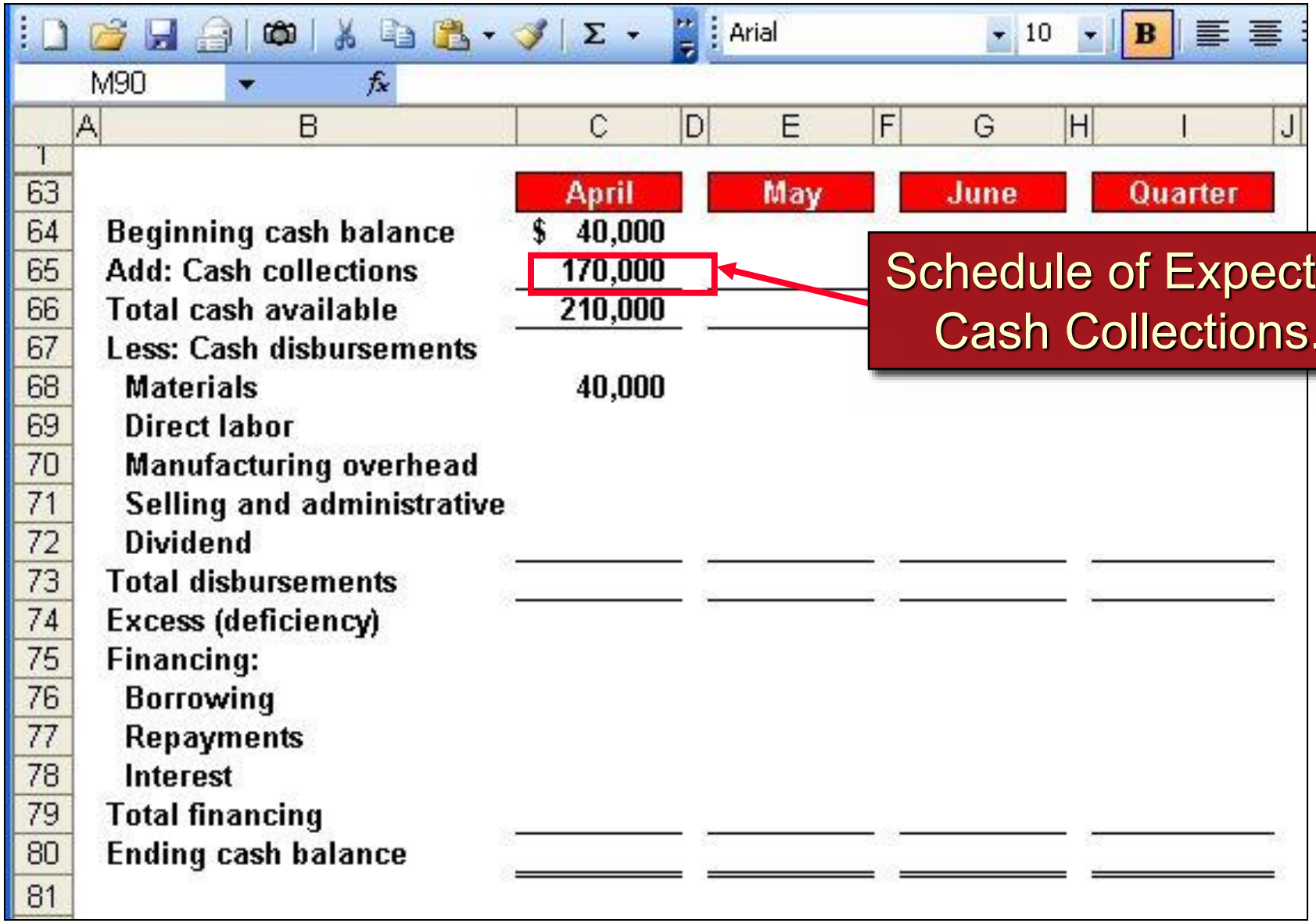
The Cash Budget



	A	B	C	D	E	F	G	H	I	J
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										

Beginning Cash Balance

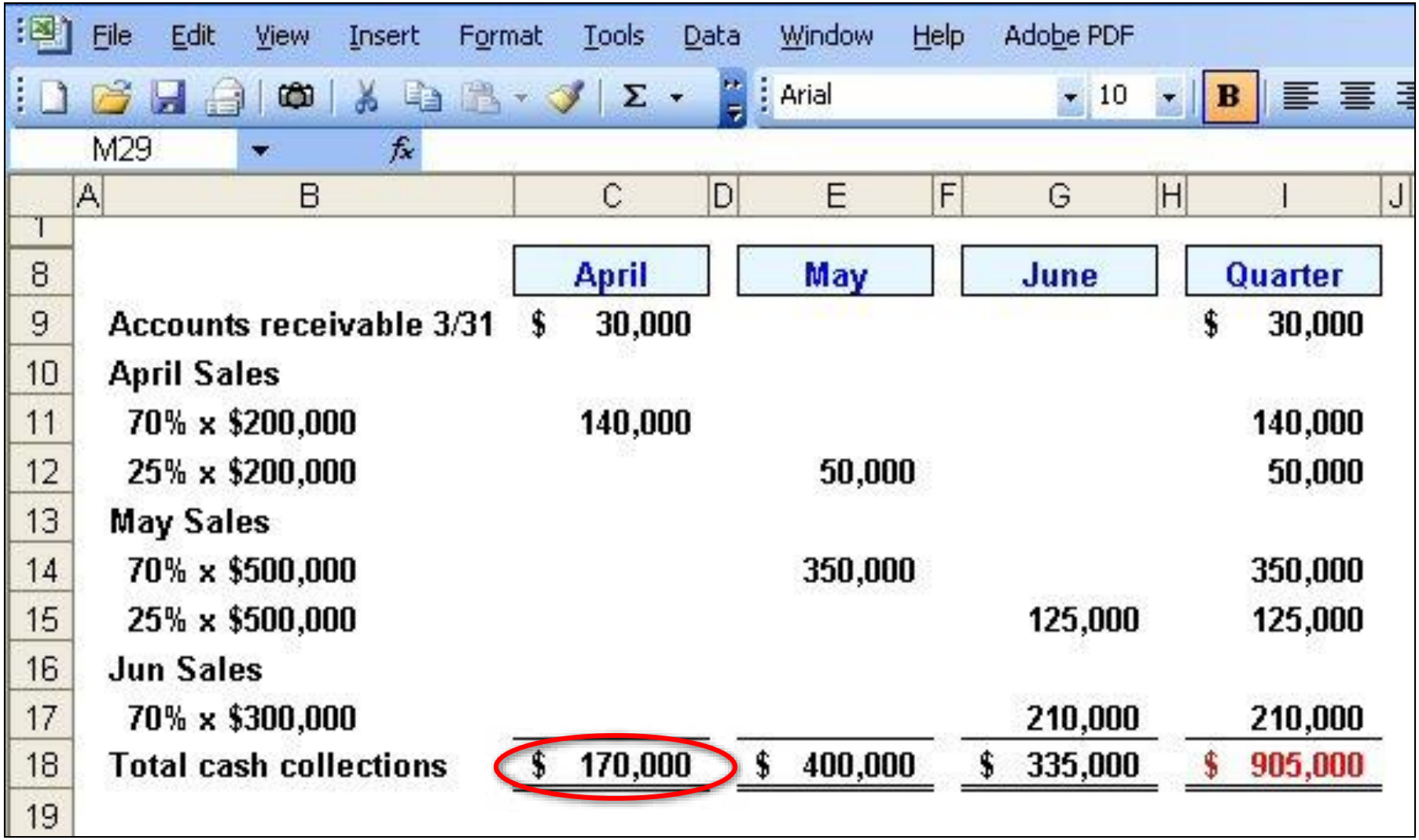
The Cash Budget



	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



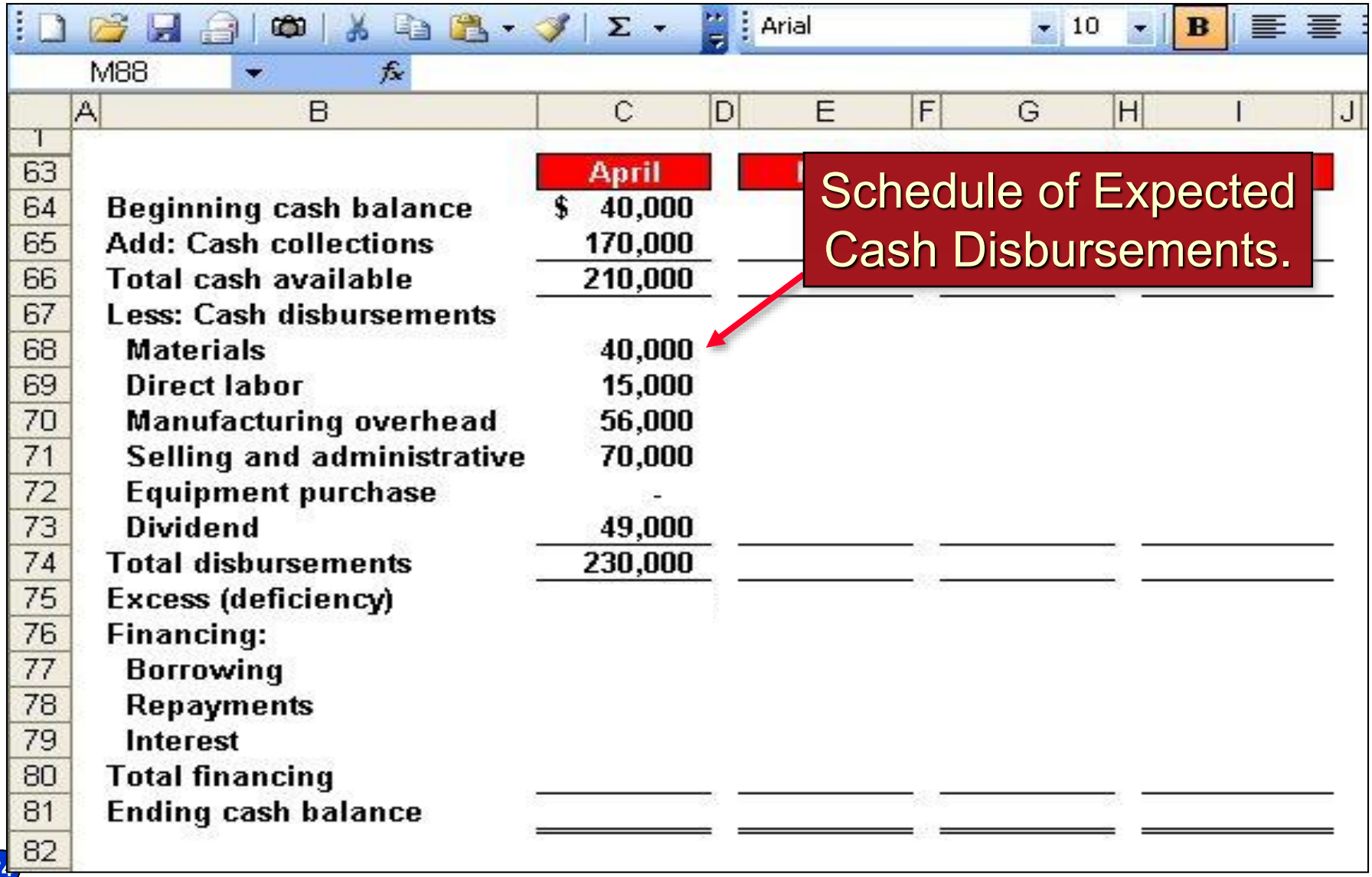
File Edit View Insert Format Tools Data Window Help Adobe PDF

Arial 10 B

M29 fx

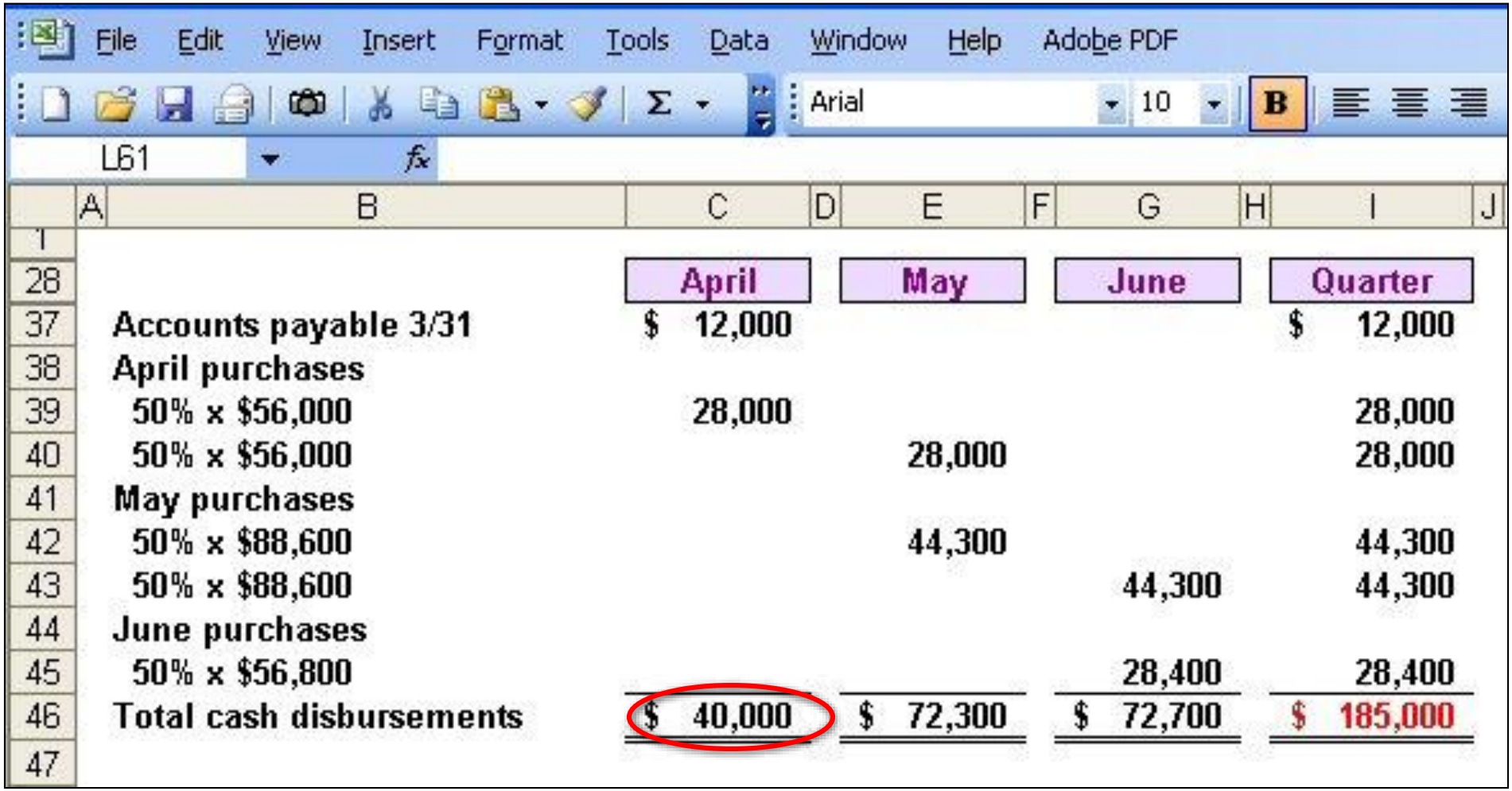
	A	B	C	D	E	F	G	H	I	J
8			April		May		June		Quarter	
9		Accounts receivable 3/31	$ 30,000						$ 30,000	
10		April Sales								
11		70% x $200,000	140,000						140,000	
12		25% x $200,000			50,000				50,000	
13		May Sales								
14		70% x $500,000			350,000				350,000	
15		25% x $500,000					125,000		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										

The Cash Budget



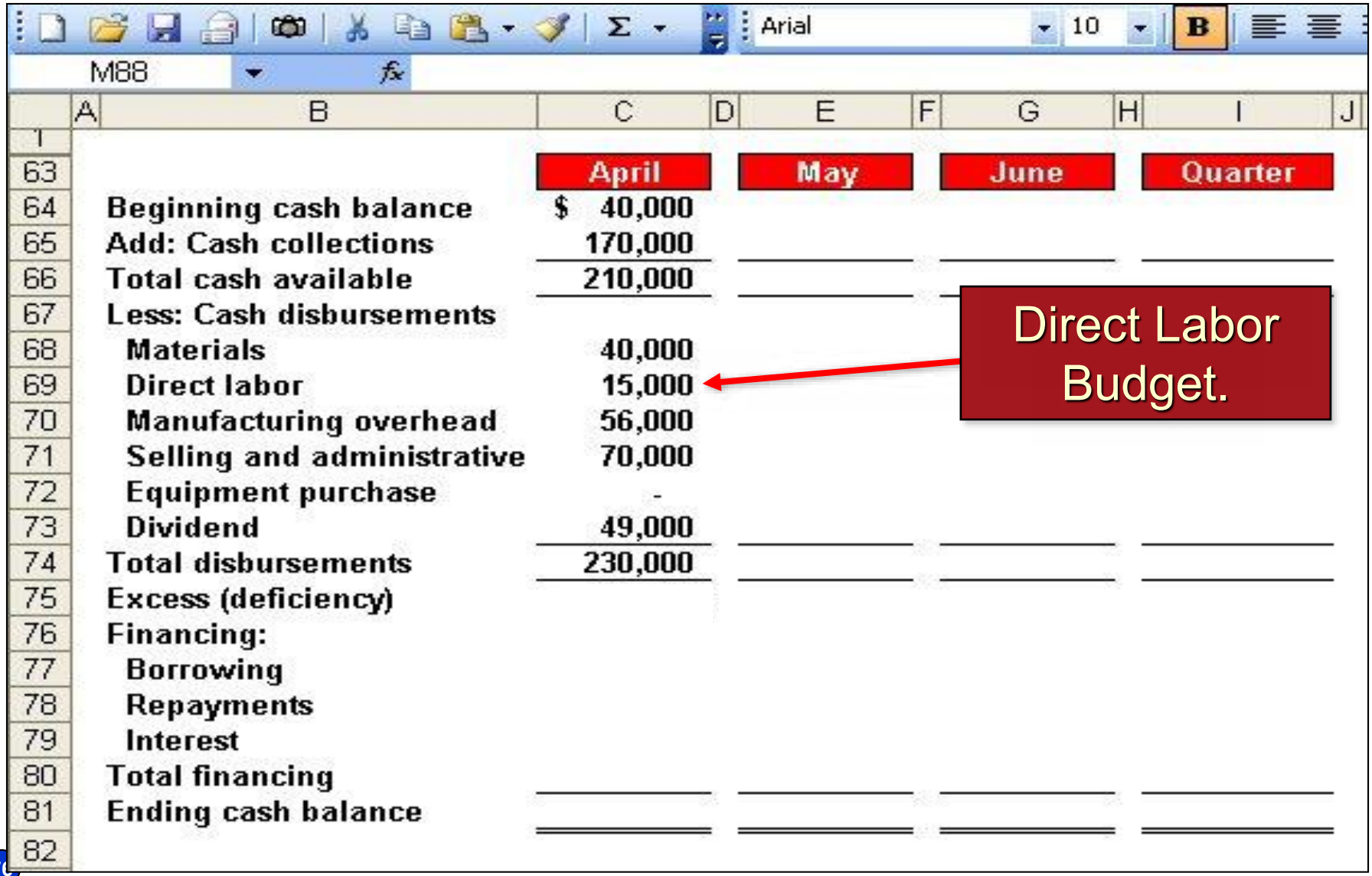
	April
Beginning cash balance	$ 40,000
Add: Cash collections	170,000
Total cash available	210,000
Less: Cash disbursements	
Materials	40,000
Direct labor	15,000
Manufacturing overhead	56,000
Selling and administrative	70,000
Equipment purchase	-
Dividend	49,000
Total disbursements	230,000
Excess (deficiency)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

Expected Cash Disbursement for Materials



		April	May	June	Quarter
37	Accounts payable 3/31	$ 12,000			$ 12,000
38	April purchases				
39	50% x $56,000	28,000			28,000
40	50% x $56,000		28,000		28,000
41	May purchases				
42	50% x $88,600		44,300		44,300
43	50% x $88,600			44,300	44,300
44	June purchases				
45	50% x $56,800			28,400	28,400
46	Total cash disbursements	$ 40,000	$ 72,300	$ 72,700	$ 185,000

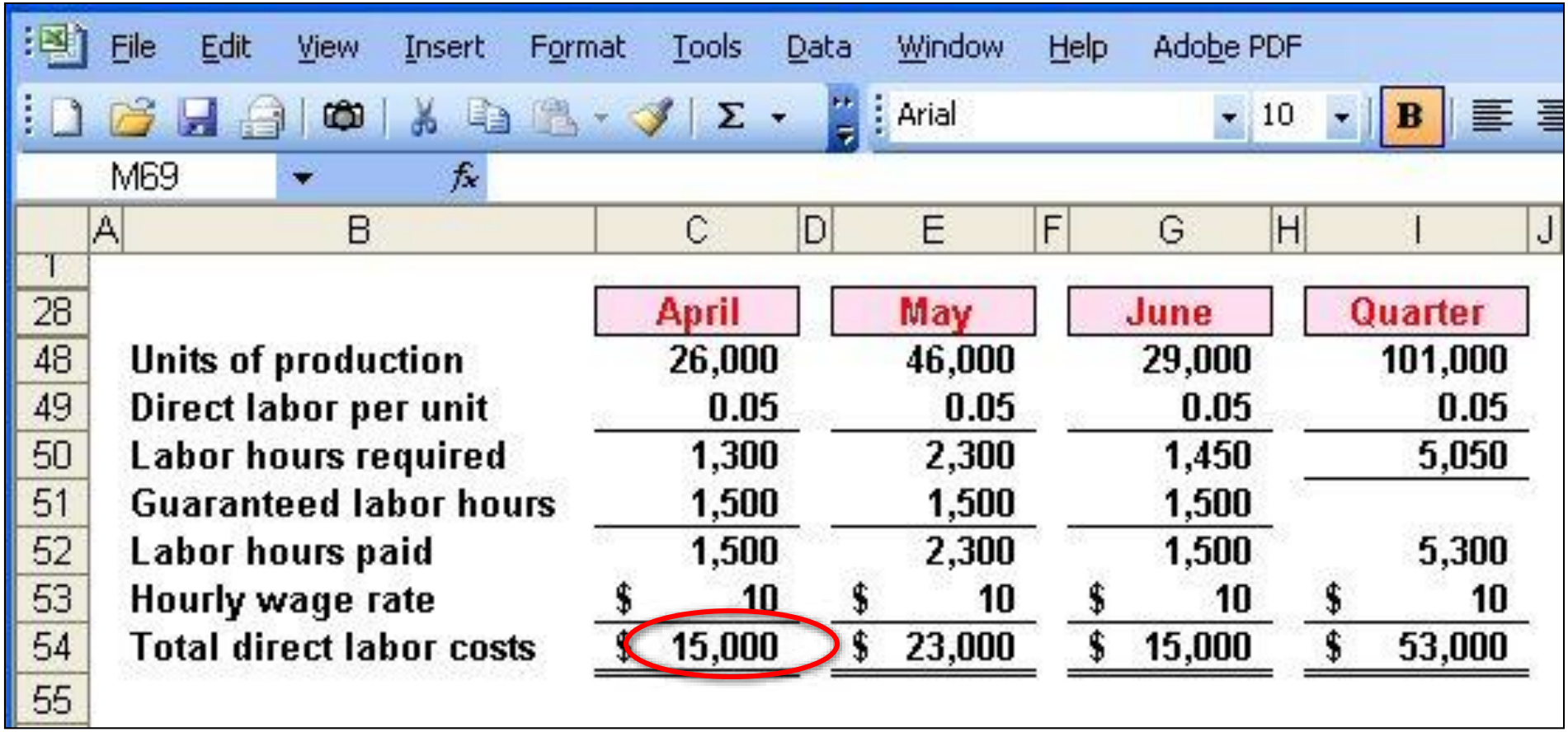
The Cash Budget



	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	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)								
76		Financing:								
77		Borrowing								
78		Repayments								
79		Interest								
80		Total financing								
81		Ending cash balance								
82										

Direct Labor Budget.

The Direct Labor Budget



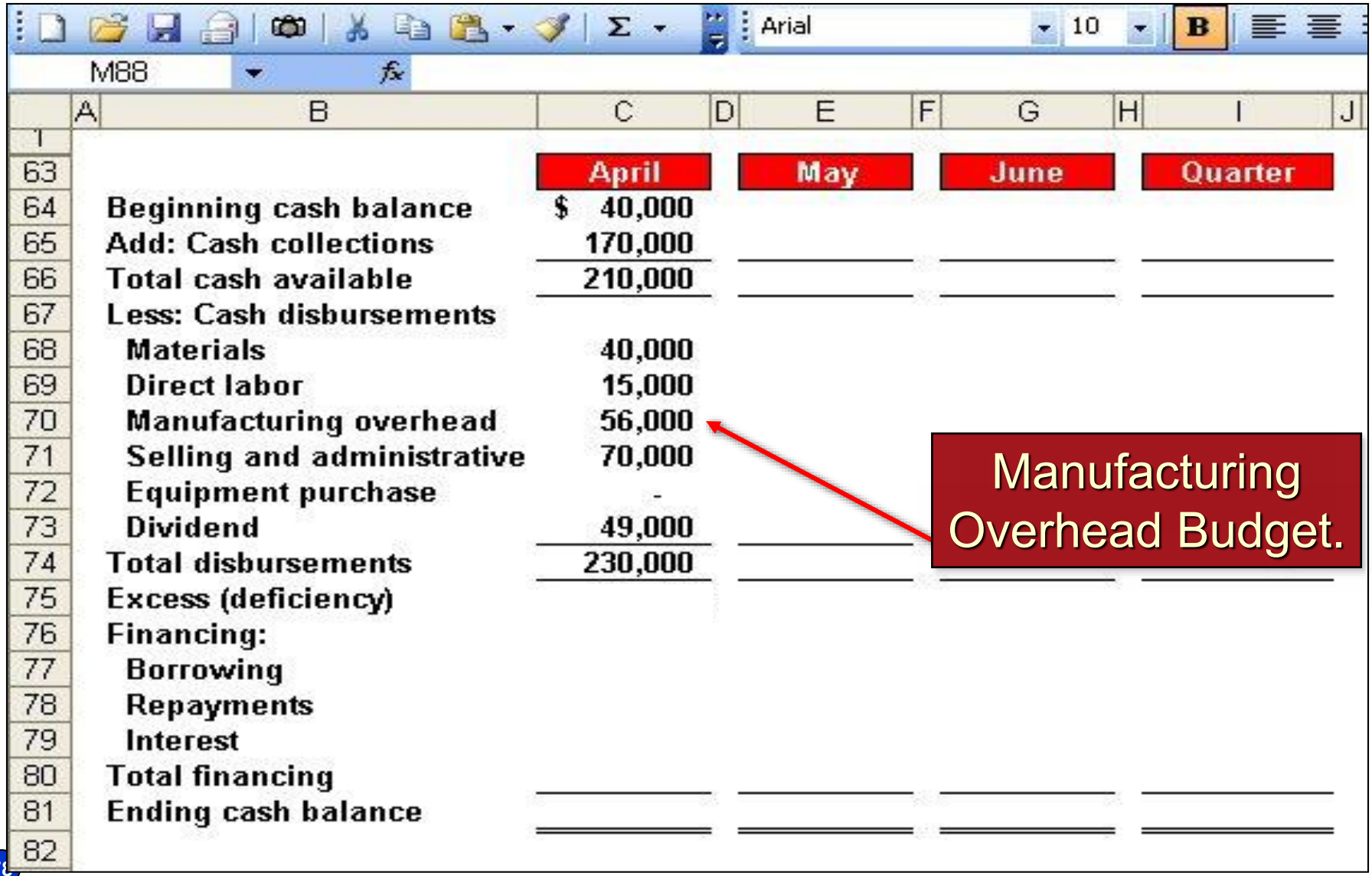
File Edit View Insert Format Tools Data Window Help Adobe PDF

Arial 10 B

M69 fx

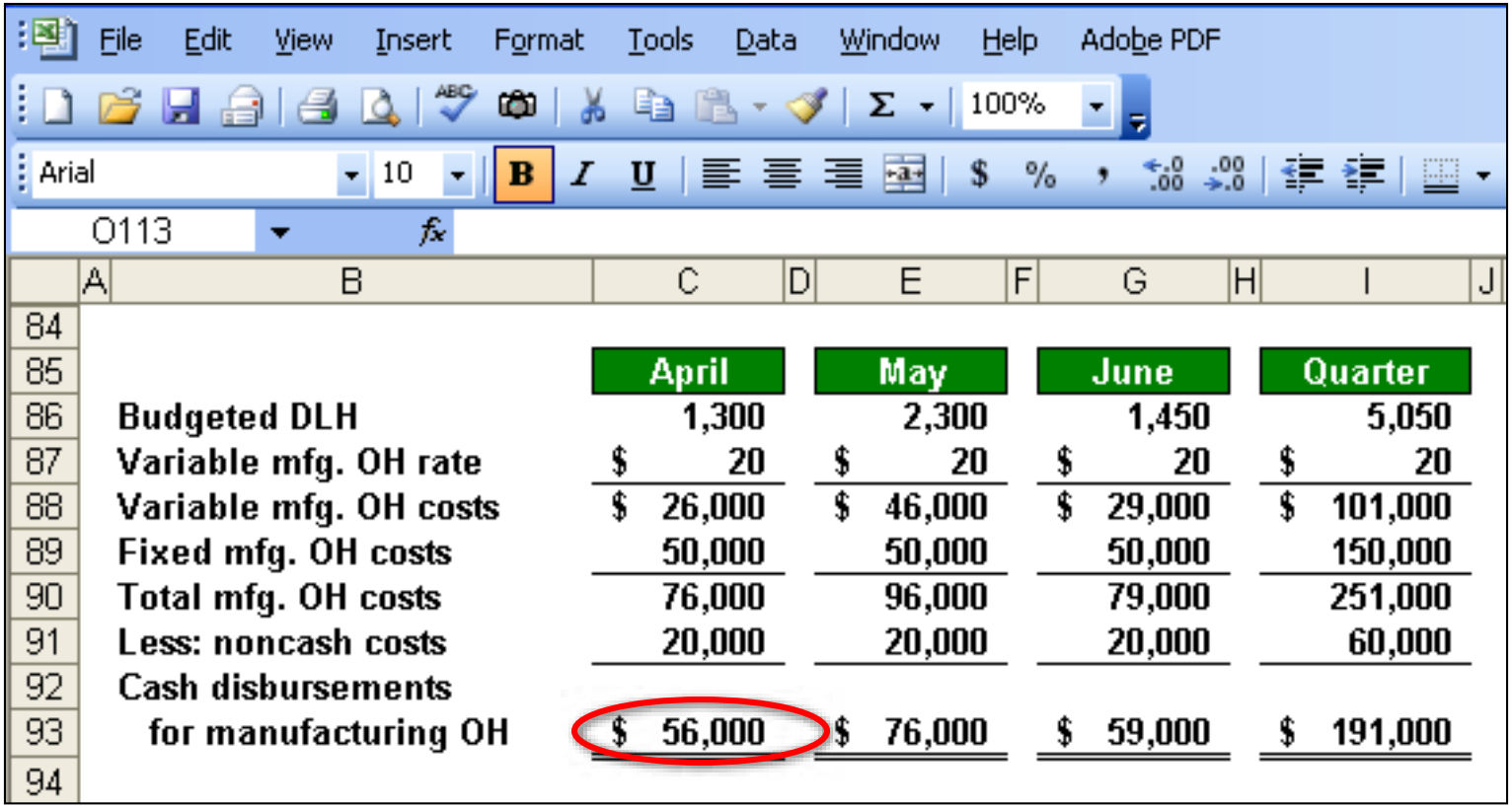
	A	B	C	D	E	F	G	H	I	J
28			April		May		June		Quarter	
48		Units of production	26,000		46,000		29,000		101,000	
49		Direct labor per unit	0.05		0.05		0.05		0.05	
50		Labor hours required	1,300		2,300		1,450		5,050	
51		Guaranteed labor hours	1,500		1,500		1,500			
52		Labor hours paid	1,500		2,300		1,500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

The Cash Budget



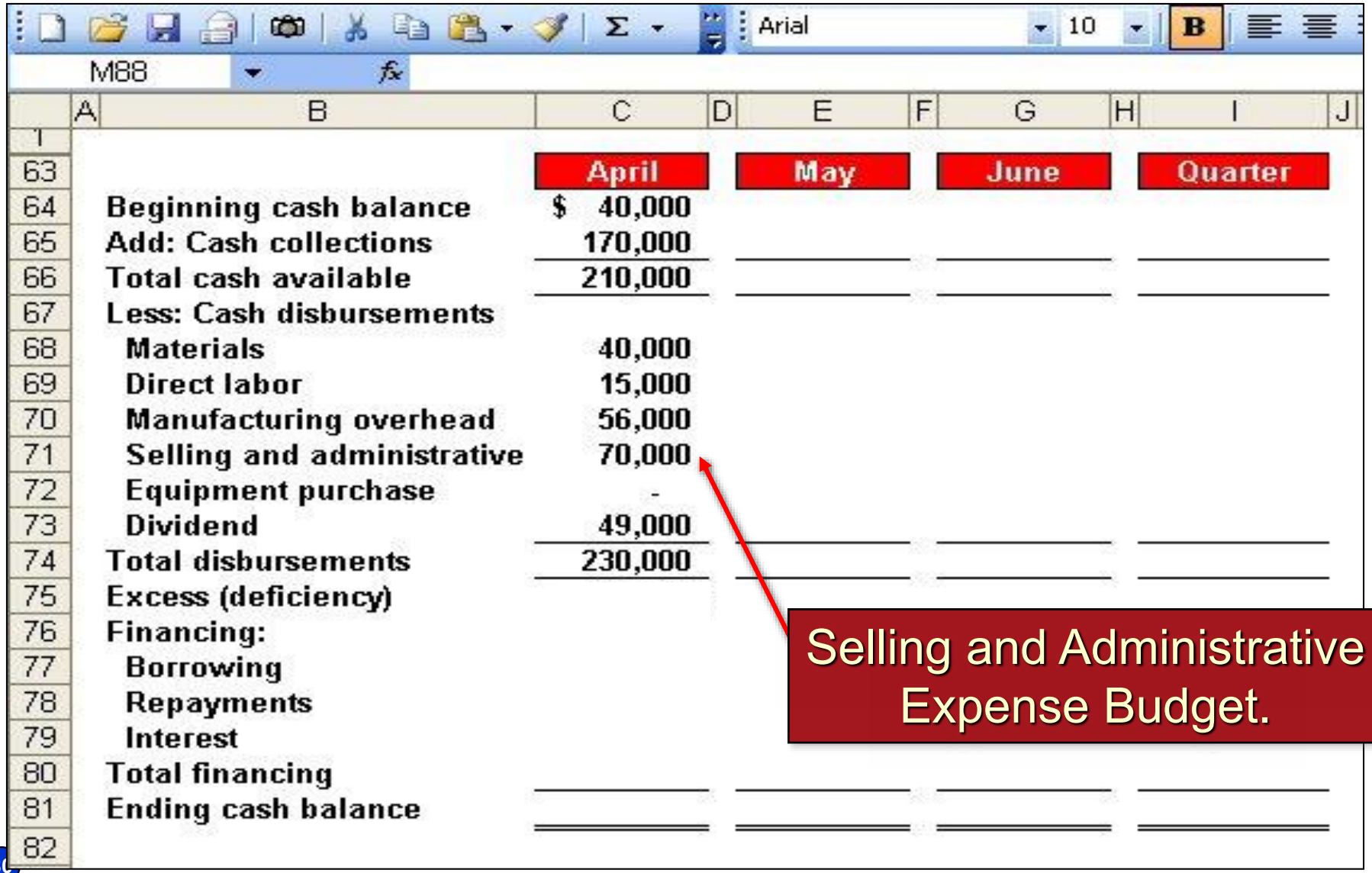
	April	May	June	Quarter
Beginning cash balance	$ 40,000			
Add: Cash collections	170,000			
Total cash available	210,000			
Less: Cash disbursements				
Materials	40,000			
Direct labor	15,000			
Manufacturing overhead	56,000			
Selling and administrative	70,000			
Equipment purchase	-			
Dividend	49,000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

Manufacturing Overhead Budget



	April	May	June	Quarter
Budgeted DLH	1,300	2,300	1,450	5,050
Variable mfg. OH rate	$ 20	$ 20	$ 20	$ 20
Variable mfg. OH costs	$ 26,000	$ 46,000	$ 29,000	$ 101,000
Fixed mfg. OH costs	50,000	50,000	50,000	150,000
Total mfg. OH costs	76,000	96,000	79,000	251,000
Less: noncash costs	20,000	20,000	20,000	60,000
Cash disbursements for manufacturing OH	$ 56,000	$ 76,000	$ 59,000	$ 191,000

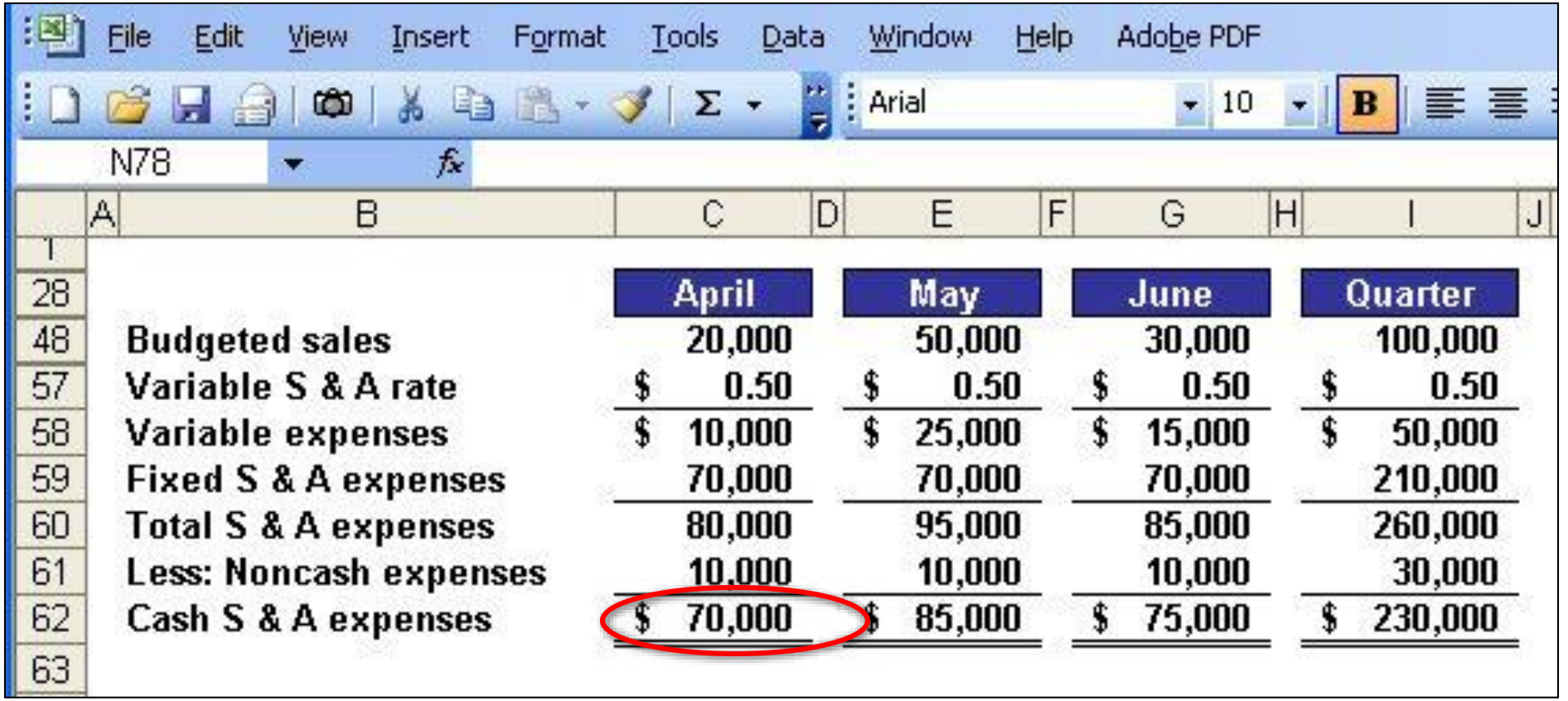
The Cash Budget



	April	May	June	Quarter
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				

Selling and Administrative Expense Budget.

Selling Administrative Expense Budget



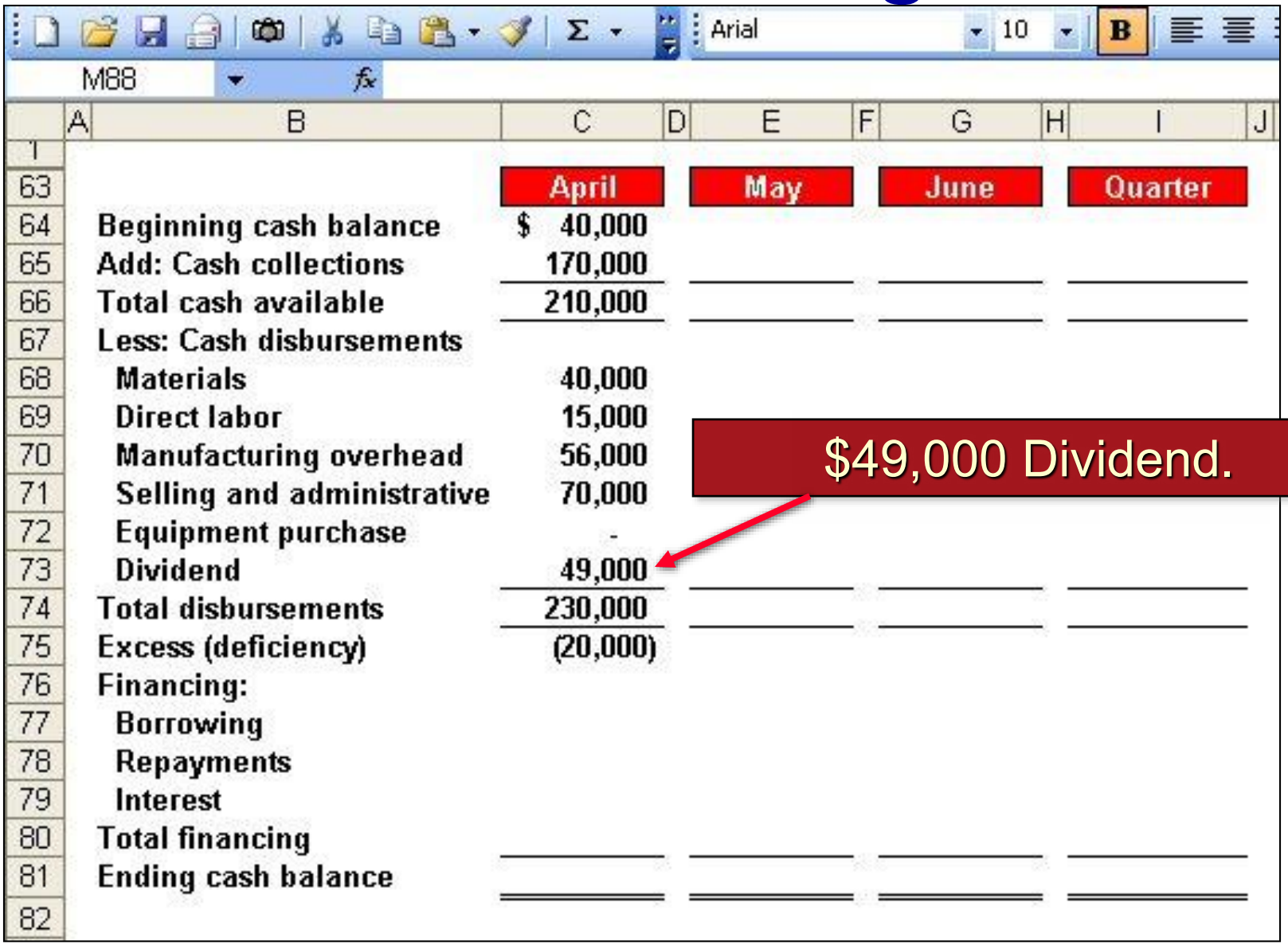
	April	May	June	Quarter
Budgeted sales	20,000	50,000	30,000	100,000
Variable S & A rate	$ 0.50	$ 0.50	$ 0.50	$ 0.50
Variable expenses	$ 10,000	$ 25,000	$ 15,000	$ 50,000
Fixed S & A expenses	70,000	70,000	70,000	210,000
Total S & A expenses	80,000	95,000	85,000	260,000
Less: Noncash expenses	10,000	10,000	10,000	30,000
Cash S & A expenses	$ 70,000	$ 85,000	$ 75,000	$ 230,000

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



M88

	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	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										

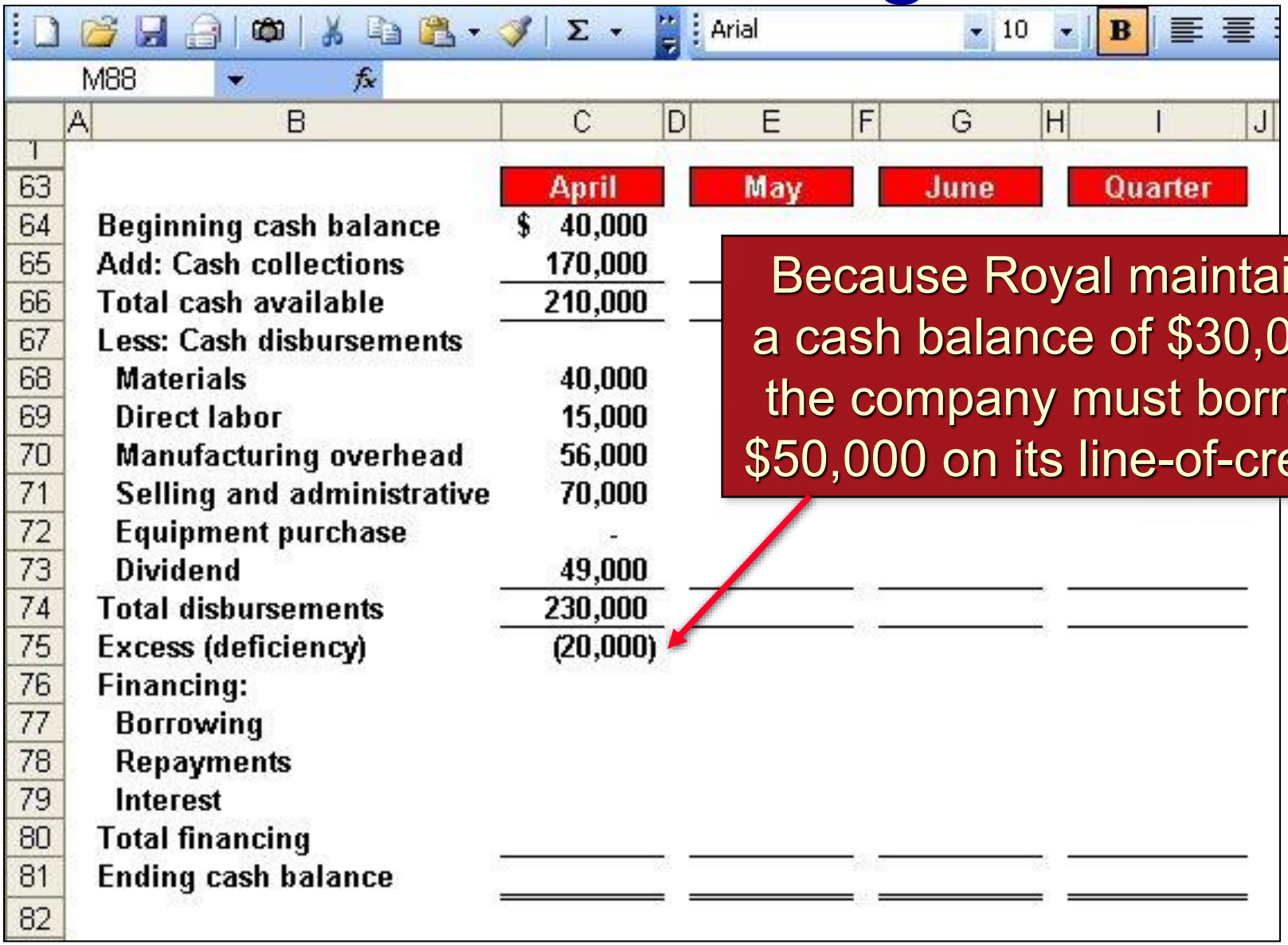
$49,000 Dividend.

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.

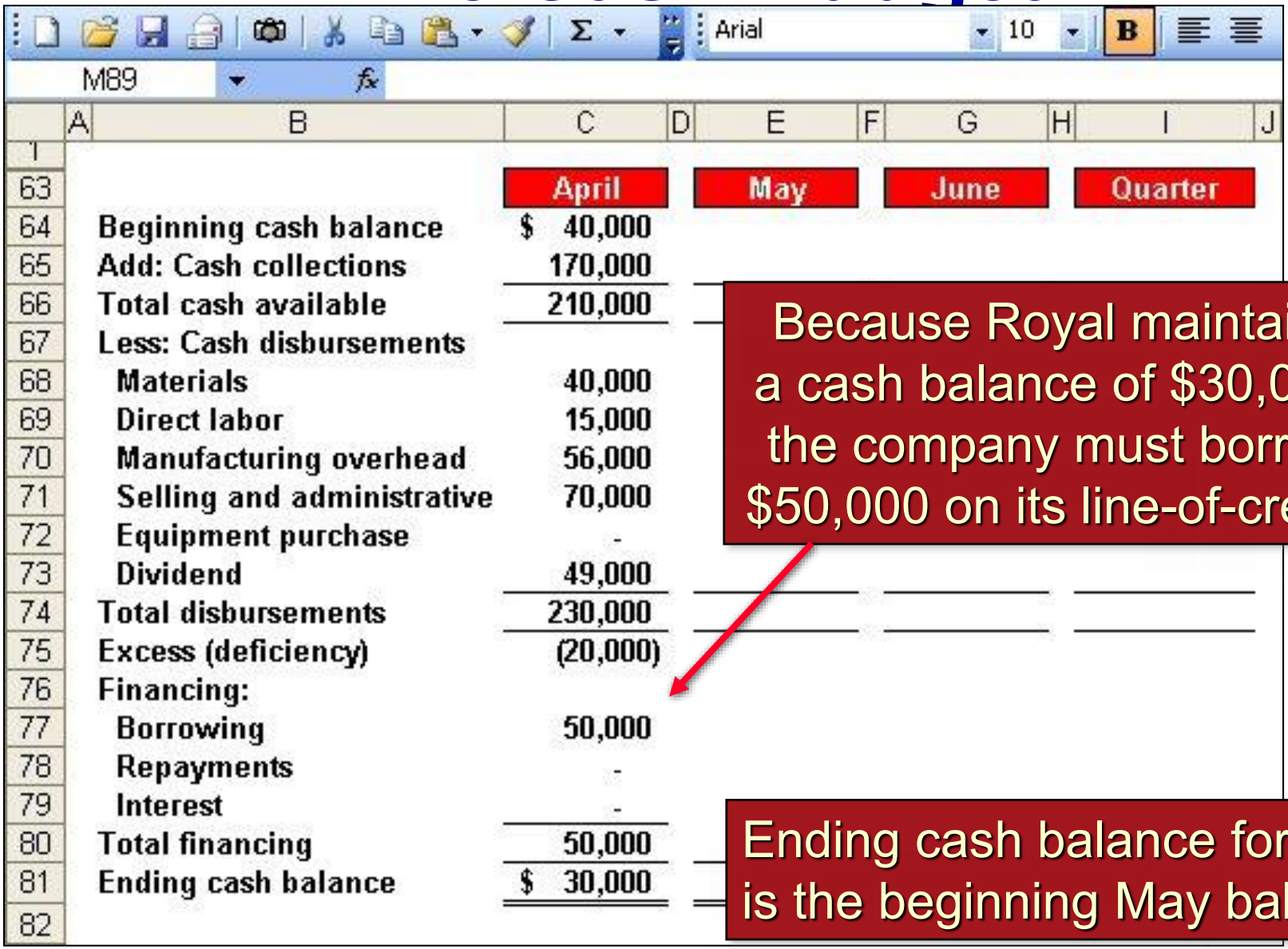
The Cash Budget



	A	B	C	D	E	F	G	H	I	J
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										

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

The Cash Budget



M89

	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	50,000							
78		Repayments	-							
79		Interest	-							
80		Total financing	50,000							
81		Ending cash balance	$ 30,000							
82										

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

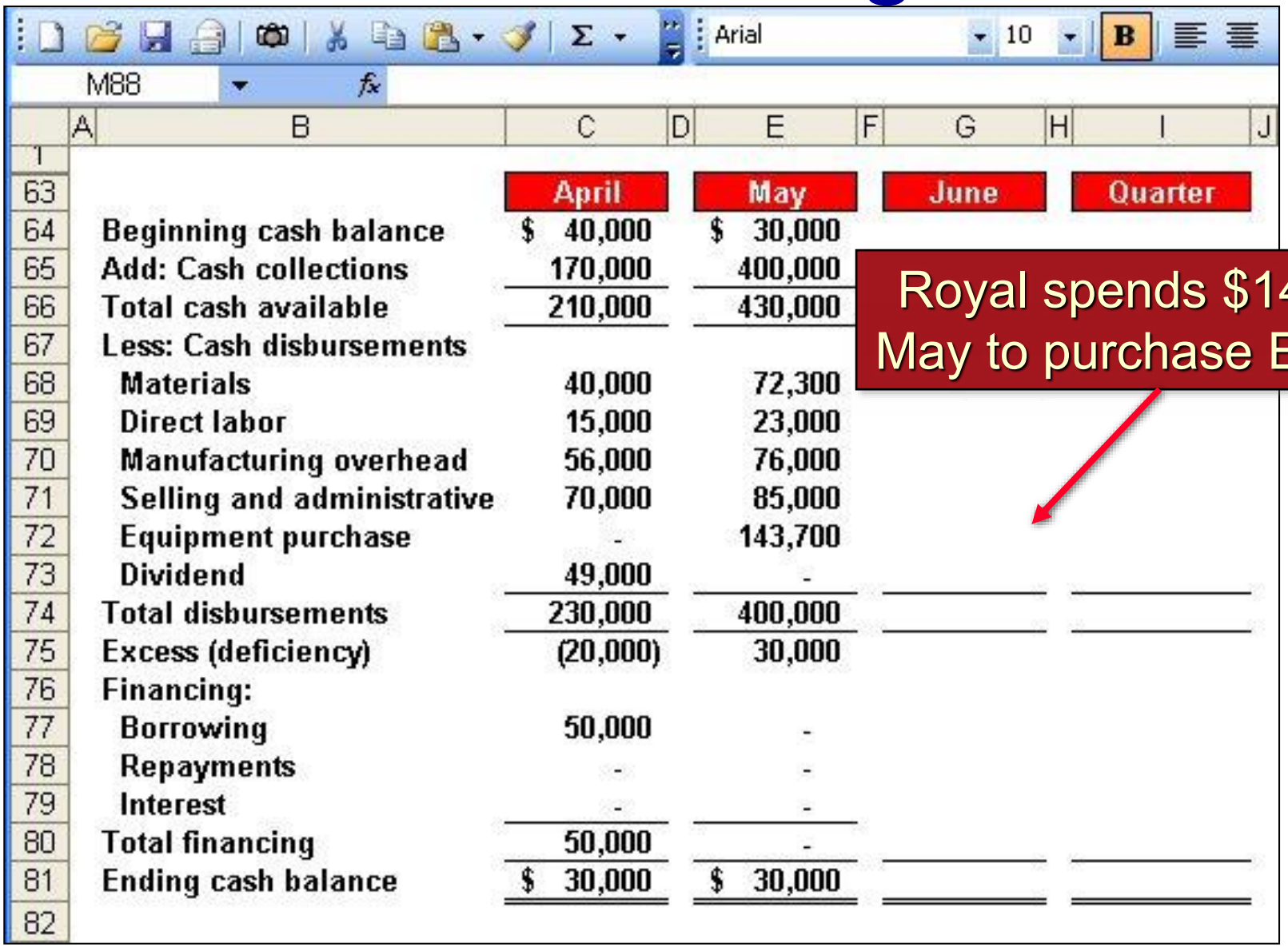
Ending cash balance for April is the beginning May balance.

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



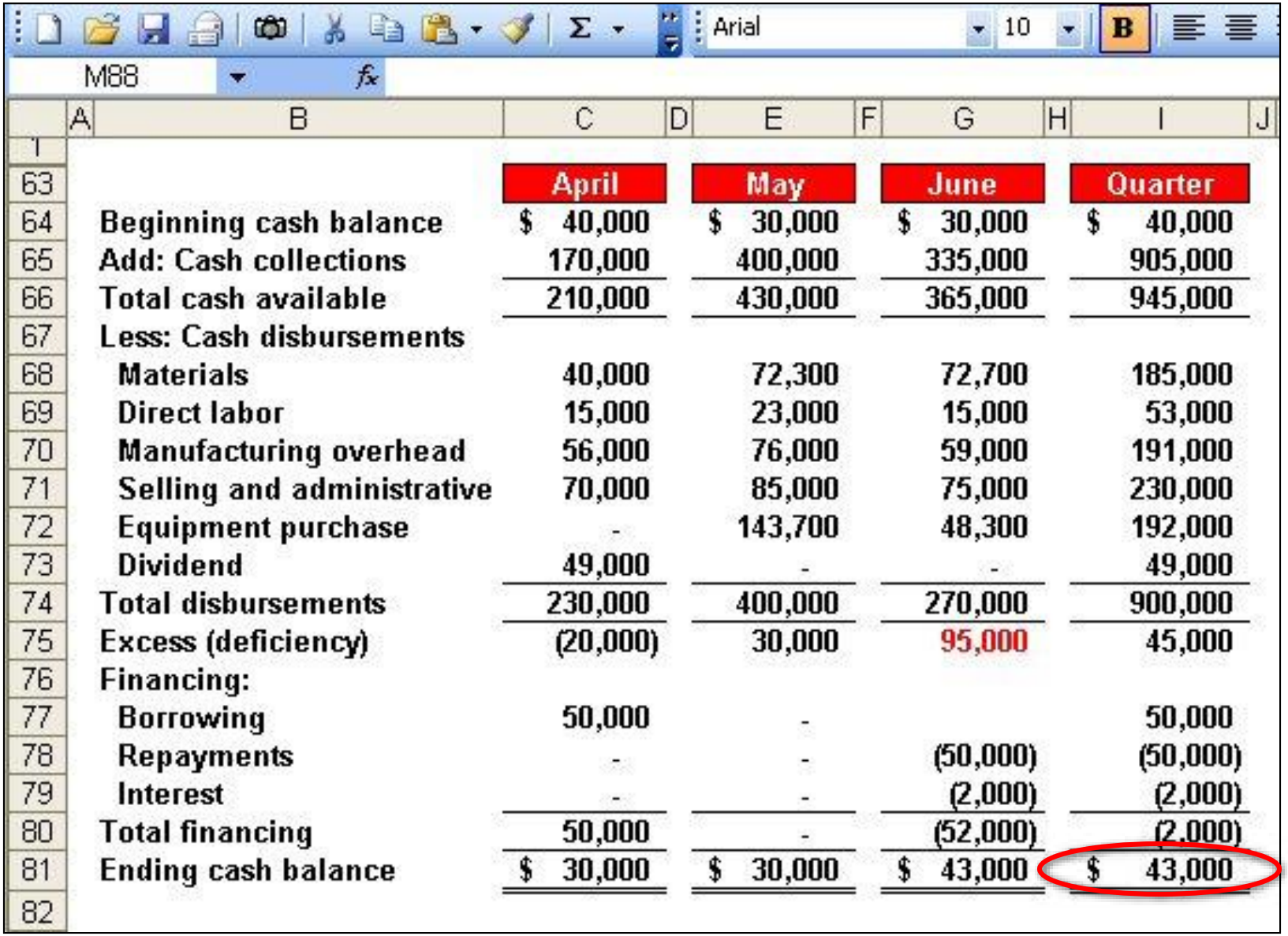
	A	B	C	D	E	F	G	H	I	J
1										
63			April		May		June		Quarter	
64		Beginning cash balance	$ 40,000		$ 30,000					
65		Add: Cash collections	170,000		400,000					
66		Total cash available	210,000		430,000					
67		Less: Cash disbursements								
68		Materials	40,000		72,300					
69		Direct labor	15,000		23,000					
70		Manufacturing overhead	56,000		76,000					
71		Selling and administrative	70,000		85,000					
72		Equipment purchase	-		143,700					
73		Dividend	49,000		-					
74		Total disbursements	230,000		400,000					
75		Excess (deficiency)	(20,000)		30,000					
76		Financing:								
77		Borrowing	50,000		-					
78		Repayments	-		-					
79		Interest	-		-					
80		Total financing	50,000		-					
81		Ending cash balance	$ 30,000		$ 30,000					
82										

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.

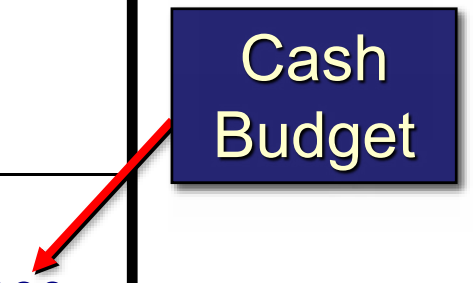
The Cash Budget



	April	May	June	Quarter
Beginning cash balance	$ 40,000	$ 30,000	$ 30,000	$ 40,000
Add: Cash collections	170,000	400,000	335,000	905,000
Total cash available	210,000	430,000	365,000	945,000
Less: Cash disbursements				
Materials	40,000	72,300	72,700	185,000
Direct labor	15,000	23,000	15,000	53,000
Manufacturing overhead	56,000	76,000	59,000	191,000
Selling and administrative	70,000	85,000	75,000	230,000
Equipment purchase	-	143,700	48,300	192,000
Dividend	49,000	-	-	49,000
Total disbursements	230,000	400,000	270,000	900,000
Excess (deficiency)	(20,000)	30,000	95,000	45,000
Financing:				
Borrowing	50,000	-		50,000
Repayments	-	-	(50,000)	(50,000)
Interest	-	-	(2,000)	(2,000)
Total financing	50,000	-	(52,000)	(2,000)
Ending cash balance	$ 30,000	$ 30,000	$ 43,000	$ 43,000

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		
Equipment		
Total assets		
Liabilities and Stockholders' Equity		
Accounts payable	$	28,400
Common stock		
Retained earnings		
Total liabilities and stockholders' equity		



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

Land & Equipment

Common Stock

Royal Company
Budgeted Balance Sheet
June 30

Assets:		
Cash	$	
Accounts receivable		
Raw materials inventory		
Finished goods inventory		24,950
Land		50,000
Equipment		367,000
Total assets		564,550
Liabilities and Stockholders' Equity		
Accounts payable	$	28,400
Common stock		200,000
Retained earnings		336,150
Total liabilities and stockholders' equity	$	564,550

Beginning balance	$146,150
Add: net income	239,000
Deduct: dividends	(49,000)
Ending balance	$336,150