CHAPTER

14 Cost Planning

M14.1.

	January	*February*	*March*	*Q1 Total*
Current sales (units)	15,000	12,000	18,000	45,000
Budgeted volume increase	10%	10%	10%	10%
Budgeted sales (units)	16,500	13,200	19,800	49,500
Budgeted selling price ($20 * 1.05) ...	$ 21	$ 21	$ 21	$ 21
Budgeted total sales	$346,000	$277,200	$415,800	$1,039,500

M14.2.

Use the cost of goods sold model, and work from the bottom up and then top down to calculate production:

	June	July
Beginning inventory.....	3,600	4,800
Add: Production.....	?	?
Goods available for sale	?	?
Less: Ending inventory (16,000 * 30%)	(4,800)	
(14,000 * 30%)		(4,200)
Units sold.....	12,000	16,000

June: Goods available for sale = 12,000 + 4,800 = 16,800 units
Production = 16,800 − 3,600 = **13,200 units**
July: Goods available for sale = 16,000 + 4,200 = 20,200 units
Production = 20,200 − 4,800 = **15,400 units**

M14.3.

Use the same approach as M14.1, but notice that raw material used is a function of quantity produced from the production budget. Each unit requires 3 pounds of raw material.

	June
Beginning inventory (13,200 * 4 pounds * 20%)	10,560
Purchases	?
Raw materials available for use	?
Less: Ending inventory (15,400 * 4 pounds * 20%)	(12,320)
Raw materials used in production (13,200 * 4 pounds)	52,800

Raw materials available for use = 52,800 + 12,320 = 65,120 pounds
Purchases = 65,120 − 10,560 = **54,560 pounds**

M14.4.

	Variable Rate	*June*	*July*	*August*
Budgeted sales (units)…..…….		12,000	16,000	14,000
Variable operating expenses:				
Sales commissions…….……..	$2.00/unit	$24,000	$32,000	$28,000
Marketing promotions……..	$1.00/unit	12,000	16,000	14,000
Supplies…….	$0.75/unit	9,000	12,000	10,500
Bad debt expense……..	$0.25/unit	3,000	4,000	3,500
Utilities……..	$0.50/unit	6,000	8,000	7,000
Total variable expense…….…...		$54,000	$72,000	$63,000
Fixed operating expenses:				
Salaries……..		$ 2,000	$ 2,000	$ 2,000
Rent……...		5,000	5,000	5,000
Depreciation……..		2,400	2,400	2,400
Advertising……		3,200	3,200	3,200
Utilities……..		3,000	3,000	3,000
Total fixed expense…….……...		$15,600	$15,600	$15,600
Budgeted operating expense…….		$69,600	$87,600	$78,600

P14.25.

a.

	April	*May*	*June*	*Total*
Expected sales in units	7,000	10,000	8,000	25,000
Selling price per unit	$40	$40	$40	$40
Total sales	**$280,000**	**$400,000**	**$320,000**	**$1,000,000**

b.

Cash collections from:	*April*	*May*	*June*	*Total*
March sales	$132,000[a]			$132,000
April sales	112,000	$154,000		266,000
May sales		160,000	$220,000	380,000
June sales			128,000	128,000
Total cash collections	**$244,000**	**$314,000**	**$348,000**	**$906,000**

[(a)] Sales from February and all prior months would have been fully collected (or written off) by the end of March. Thus, the $132,000 net realizable value of accounts receivable represents the 55% of March sales that will be collected in April (6,000 units sold in March * $40 * 55% = $132,000).

c.

Beginning inventory of finished goods ……	3,500	5,000	4,000	3,500
Units to be produced……	**8,500**	**9,000**	**8,500**	**26,000**
Goods available for sale …….	12,000	14,000	12,500	29,500
Desired ending inventory of finished goods (50% of next month's budgeted sales) ……	(5,000)	(4,000)	(4,500)	(4,500)
Quantity of goods sold ……	7,000	10,000	8,000	25,000

Note: In the total column, the beginning and ending inventory figures represent the number of units on hand at April 1, 2016 and June 30, 2016, respectively. Thus, the "goods available for sale" line does not add across.