

Price Is The Customer's Cost.

- ◆ Costs are incurred by businesses as they seek to make profit.
- ◆ A customer buys what you are selling for one dollar.
 - ◆ Your price was a dollar and the customer incurred a cost of one dollar.

2

Profit

Sales Revenue Minus Total Costs
Is Profit

$$Z = R - C$$

where
Z = Profit
R = Sales Revenue
C = Total Cost

3

Example of Profit

If your sales revenue is \$5,000 and your total costs are \$4,000, then what is your profit, Z?

$$Z = R - C$$

4

Example of Profit

$$Z = R - C$$

where

$$R = \$5,000$$

$$C = \$4,000$$

then

$$Z = \$5000 - \$4000$$

$$Z = \$1000$$

5

Total Costs

Total Costs Include Total Variable Costs and Total Fixed Costs.

6

Fixed Costs

- ◆ Fixed Costs Don't Change Regardless Of The Production Volume.
e.g., Rent, Salaries, and Depreciation

7

Variable Costs per Unit

The variable cost per unit includes the direct materials, the direct labor, and the direct overheads involved in making one unit.

8

Total Variable Costs

- ◆ Are Costs Directly Related To Production, Marketing and Administration of goods sold.
- ◆
- ◆ The Total Increases If Sales Levels Increase

9

Variable Costs per Unit

The Variable Manufacturing cost per unit include the direct materials, the direct labor, and the direct overheads involved in making one unit.

10

For Example

- ◆ If It Takes A Man 5 hours To Make A Widget
- ◆ He Is Paid \$10 An Hour,
Then Direct Labor Cost Is \$50 Per Widget.

11

For Example

- ◆ A retailer's Cost Of Goods Sold Is A Variable Cost
 - ◆ If a retailer buys apples for \$1.00 a pound and then his variable cost is \$1.00 a pound.

12

Variable Marketing Costs

include

- ◆Coupons, Rebates
- ◆Sales commissions
- ◆Postage stamp freight
- ◆Installations
- ◆Training

13

Total Variable Cost

Total Variable Cost is the Variable Cost per Unit, V , times the number of units sold or produced, Q .

14

Total Variable Cost

Total Variable Cost = $V(Q)$

where

- ◆ V = the variable cost per unit
- ◆ Q = the Quantity or Number of Units Sold

15

Total Cost

Is the sum of total variable cost and the total fixed costs

16

Total Cost

$$C = VQ - F$$

where

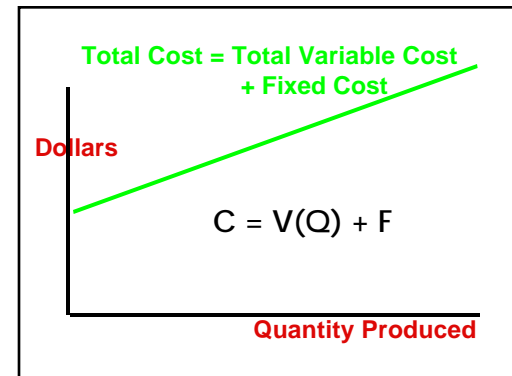
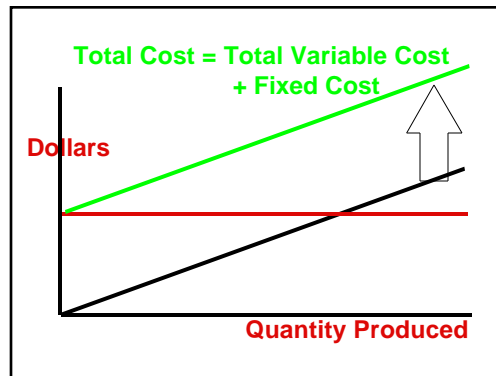
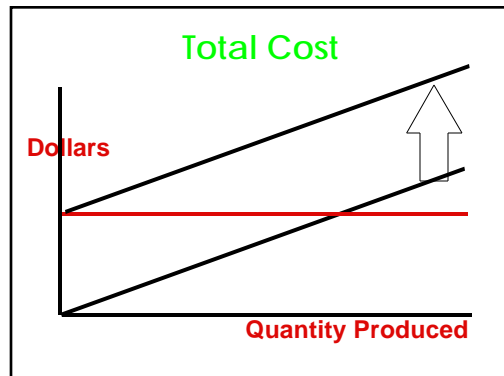
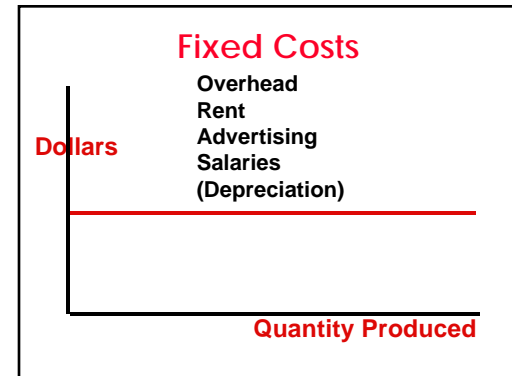
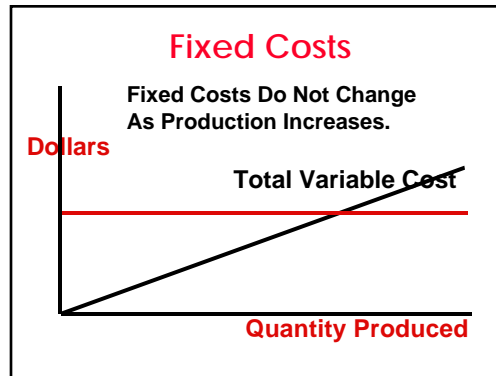
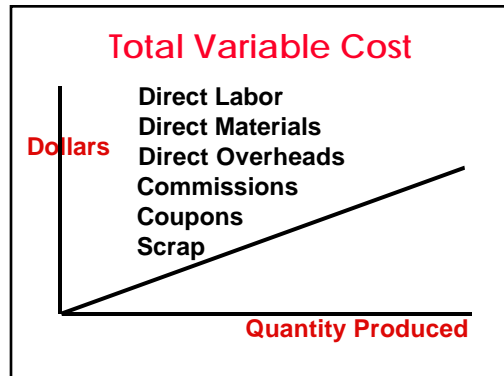
- C = Total Cost
- V = Variable Cost Per Unit
- Q = Quantity of Units Sold
- F = the Fixed or Period costs

17

Total Variable Cost

Total Variable Cost Increases As Production Increases.





Example of Total Cost

A widget costs \$10 per unit in raw materials and \$30 per unit in direct labor. A total of 500 units are sold. The rent and advertising cost a \$3,000. What is the total cost.

25

Example of Total Cost

$$C = VQ + F$$

where

$$V = \$10 + \$30 = \$40$$
$$Q = 500$$
$$F = 3,000$$

26

Example of Total Cost

$$C = VQ + F$$
$$C = 40(500) + 3,000$$
$$C = 20,000 + 3,000 = 23,000$$

27

2 Methods of Spreading Costs

- ◆1. Full costing is to spread all nontraceable common costs across all areas of the business such as Marketing, Personnel, etc.

28

2 Methods of Spreading Costs

- ◆2. Direct Costing is to leave nontraceable common costs as a business expense to which sales from various areas make contributions to covering.

29

Example Rent

- ◆Store Window cleaning is a common cost. If a product line is dropped and floor space is left vacant the cost of cleaning does not change.

30

Example

- ◆With a full cost approach the cost of window cleaning might be allocated to the product line as a percentage of line sales to total store sales. A product that is priced on full costing may not look profitable.

31

- ◆For Management purposes Direct costing is a better approach.

32

Full costing is

- ◆1. Arbitrary makes some lines look better or worse than they should.
- ◆2. Arbitrary allocation makes some managers look better or worse than they should.
- ◆3. Confusing

33

Six Sources Of Confusion

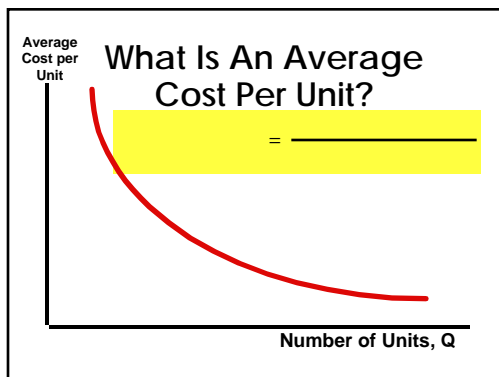
- 1 Average Cost Per Unit Is **Not** A Variable Cost
- 2 Fixed Costs Are Often Reported As Cost Per Unit
- 3 Unit Cost Is **Not** A Variable Cost

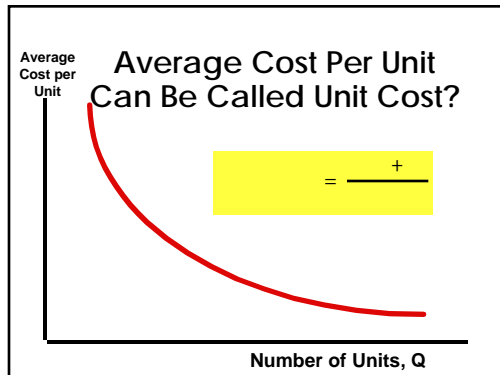
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Six Sources Of Confusion

- 4 Variable Costs May Be Constant
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- 6 Average Marginal Costs Might Be treated As A Variable Cost

35





Six Sources Of Confusion

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38

Model K-50 Unit Costs of Production at 25,000 unit volume

Labor	\$3.18	
Material	1.48	
Plating	.08	
Maintenance charges	.48	
Depreciation allowance ^a	1.60	
Overhead ^b	1.06	
Total Production Cost		\$7.88
Selling and administration charges ^c		3.94
Total costs per unit		\$11.82

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Depreciation is straight line basis over the life of the contract less residual value computed per unit of output.

41

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Allocation to cover fixed factory overhead burden, charged at the rate of 33.3% of direct labor.

43

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Allocation to cover selling and administrative expenses, charged at the rate of 50% of total factory production costs.

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45

Model K-50 Unit Costs of Production at 25,000 unit volume

Labor	\$3.18
Material	1.48
Plating	.08
Maintenance charges	.48
Depreciation allowance ^a	1.60 X 25,000 = \$40,000
Overhead ^b	1.06 x 25,000 = \$26,500
Total Production Cost	\$7.88
Selling and administration charges ^c	3.94 x 25,000 = \$98,500
Total costs per unit	\$11.82

Fixed Costs are Period Costs!

Six Sources Of Confusion

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48

Variable Cost is Not the Same Thing as UNIT COST

$$UNIT\ cost = Variable\ COST + \frac{Fixed\ COST}{Quantity\ SOLD}$$

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$$UNIT\ cost = V + \frac{F}{Q}$$

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$$UNIT\ cost = V + \frac{F}{Q}$$

UNIT COST COMBINES AVERAGE FIXED COSTS AND VARIABLE COSTS

Six Sources Of Confusion

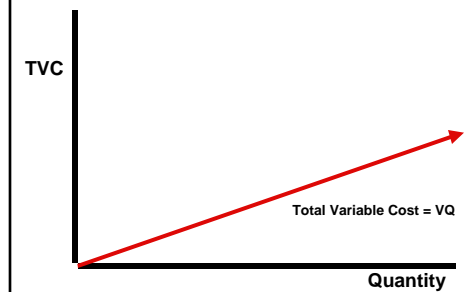
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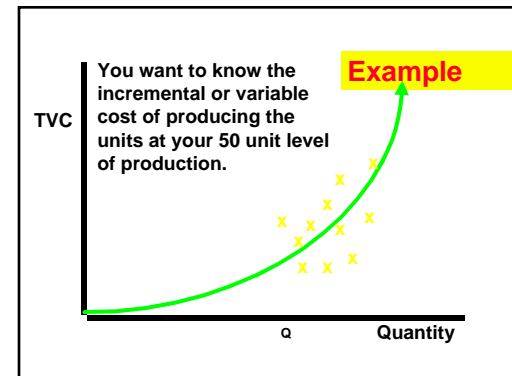
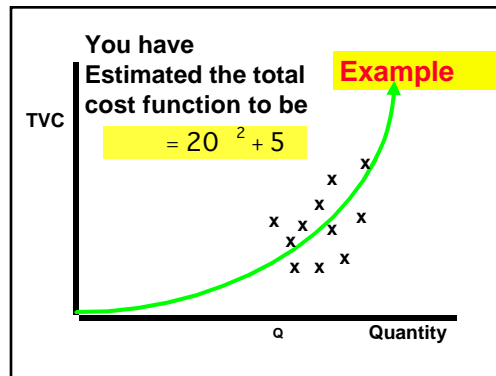
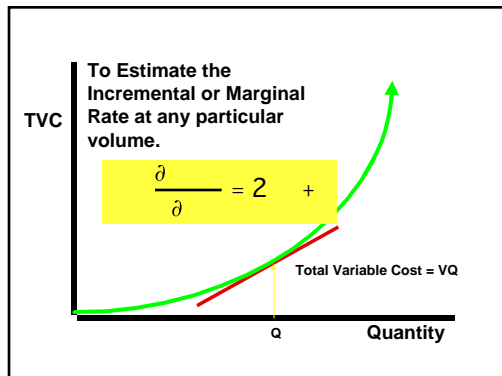
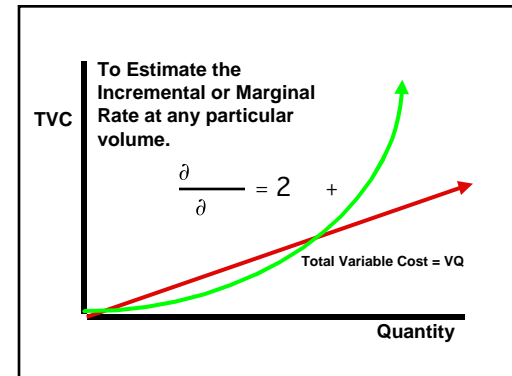
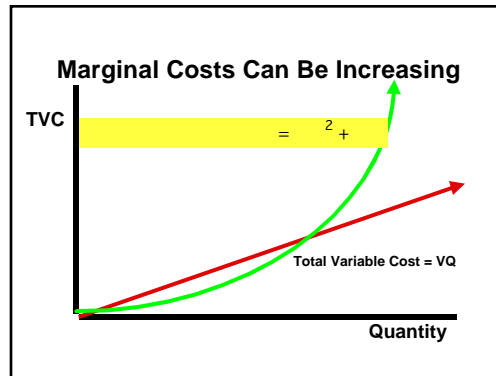
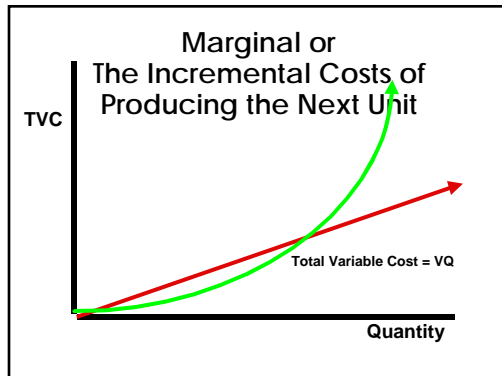
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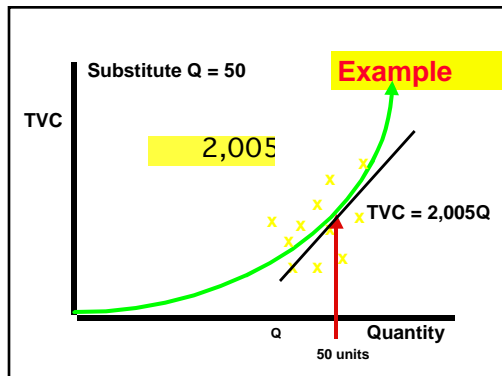
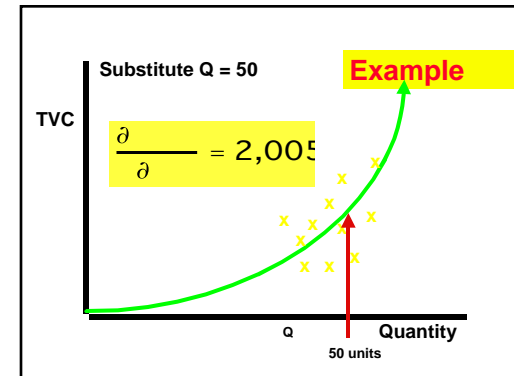
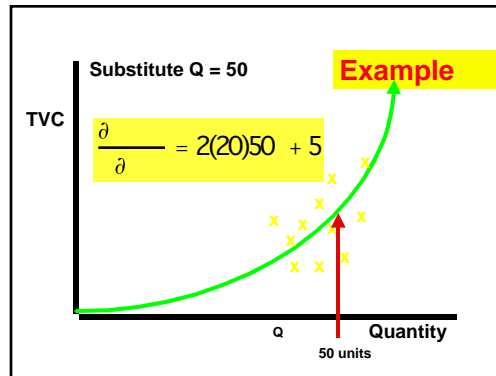
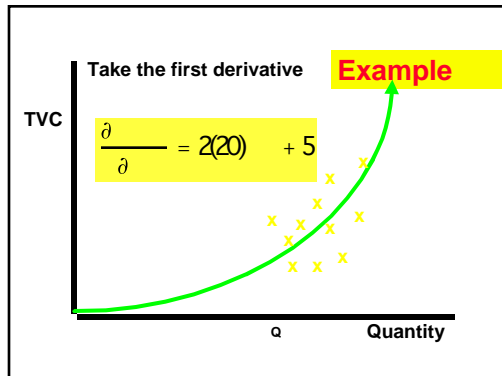
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53

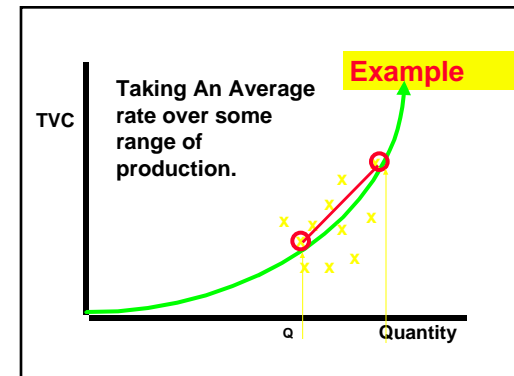


54





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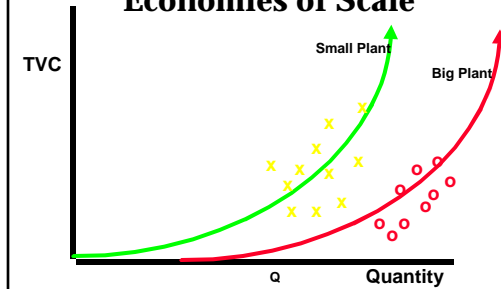
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Three More Sources of Confusion

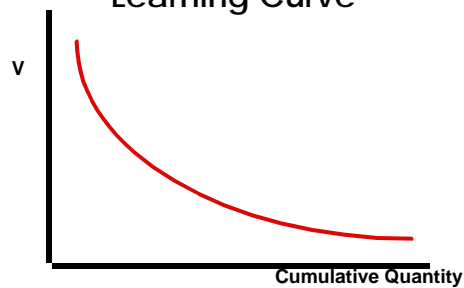
- ◆ Economies of Scale
- ◆ Learning Curve
- ◆ Accountant's desire to make managers use cost information designed for shareholders and/or tax collectors (e.g., absorption costing, depreciation) as Managerial Information.

68

Economies of Scale



Learning Curve



A Partial Profit Equation

$$Z = PQ - VQ - cPQ - A - S - F$$

where

Z = Profit

P = Price per unit

Q = Quantity sold

V = Variable costs per unit

c = Sales commission budget

S = Salaries

F = Other fixed costs

Exam Question

Why is it necessary for marketers to understand the nature of variable, fixed and unit or average costs? Give examples. Solve a problem.

72