

INTRODUCTION

- **A breakeven analysis** is used to determine how much sales volume your business needs to start making a profit.
- The breakeven analysis is especially useful when you're developing a pricing strategy, either as part of a marketing plan or a business plan.

BREAK EVEN CALCULATOR

Fixed Cost:

The sum of all costs required to produce the first unit of a product. This amount does not vary as production increases or decreases, until new capital expenditures are needed.

Variable Unit Cost:

Costs that vary directly with the production of one additional unit.



Expected Unit Sales:

Number of units of the product projected to be sold over a specific period of time.



Unit Price:

The amount of money charged to the customer for each unit of a product or service.

Total Variable Cost:

The product of expected unit sales and variable unit cost.

(Expected Unit Sales * Variable Unit Cost)

Total Cost:

The sum of the fixed cost and total variable cost for any given level of production.

(Fixed Cost + Total Variable Cost)

BREAK EVEN POINT:

Number of units that must be sold in order to produce a profit of zero (but will recover all associated costs).

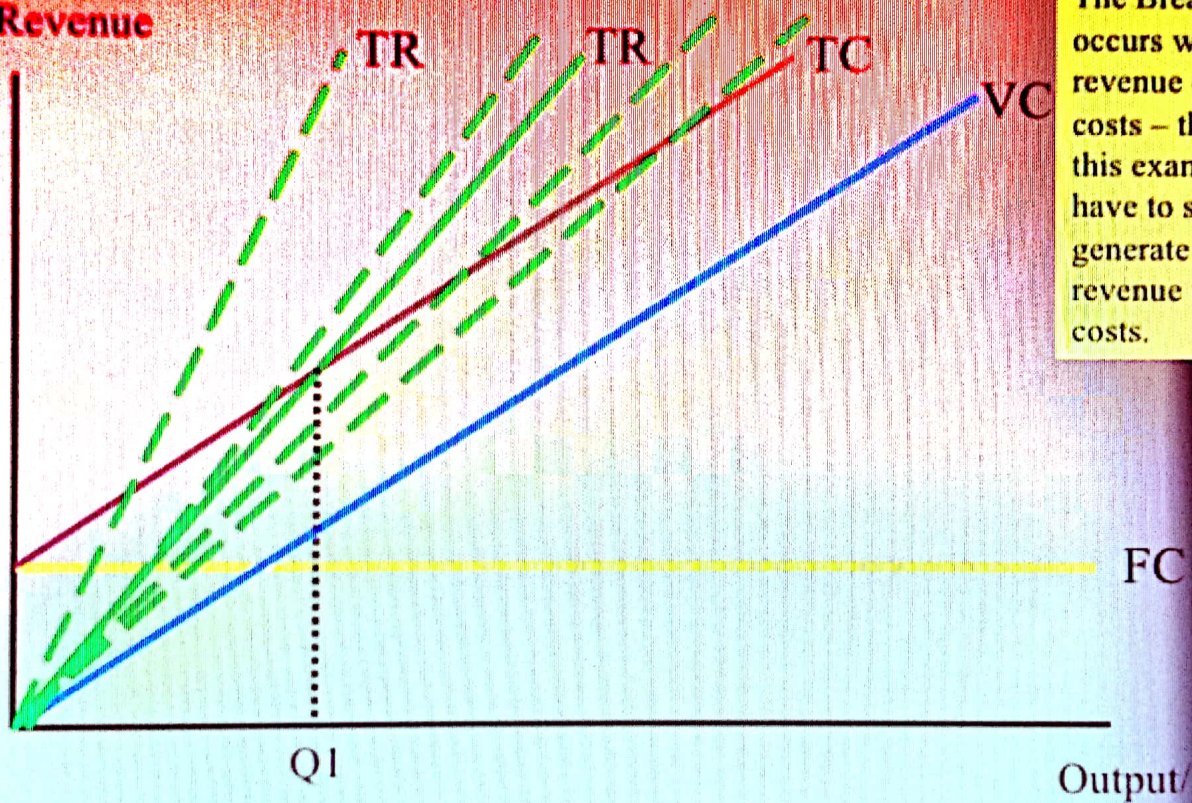
 **Break Even Point (IN UNIT) = $\frac{\text{Fixed Cost}}{\text{S. Price} - \text{Variable Unit Cost}}$**

 **Break Even Point (in Rs) = $\frac{\text{Fixed Cost}}{\text{S. Price} - \text{Variable unit Cost}} \times \text{Units}$**

- For example, suppose that your fixed costs for producing 100,000 product were 30,000 rs a year.
- Your variable costs are 2.20 rs materials, 4.00 rs labour, and 0.80 rs overhead, for a total of 7.00 rs per unit.
- If you choose a selling price of 12.00 rs for each product, then:
- $30,000 \div (12.00 - 7.00)$ equals 6000 units.
- This is the number of products that have to be sold at a selling price of 12.00 rs before your business will start to make a profit.

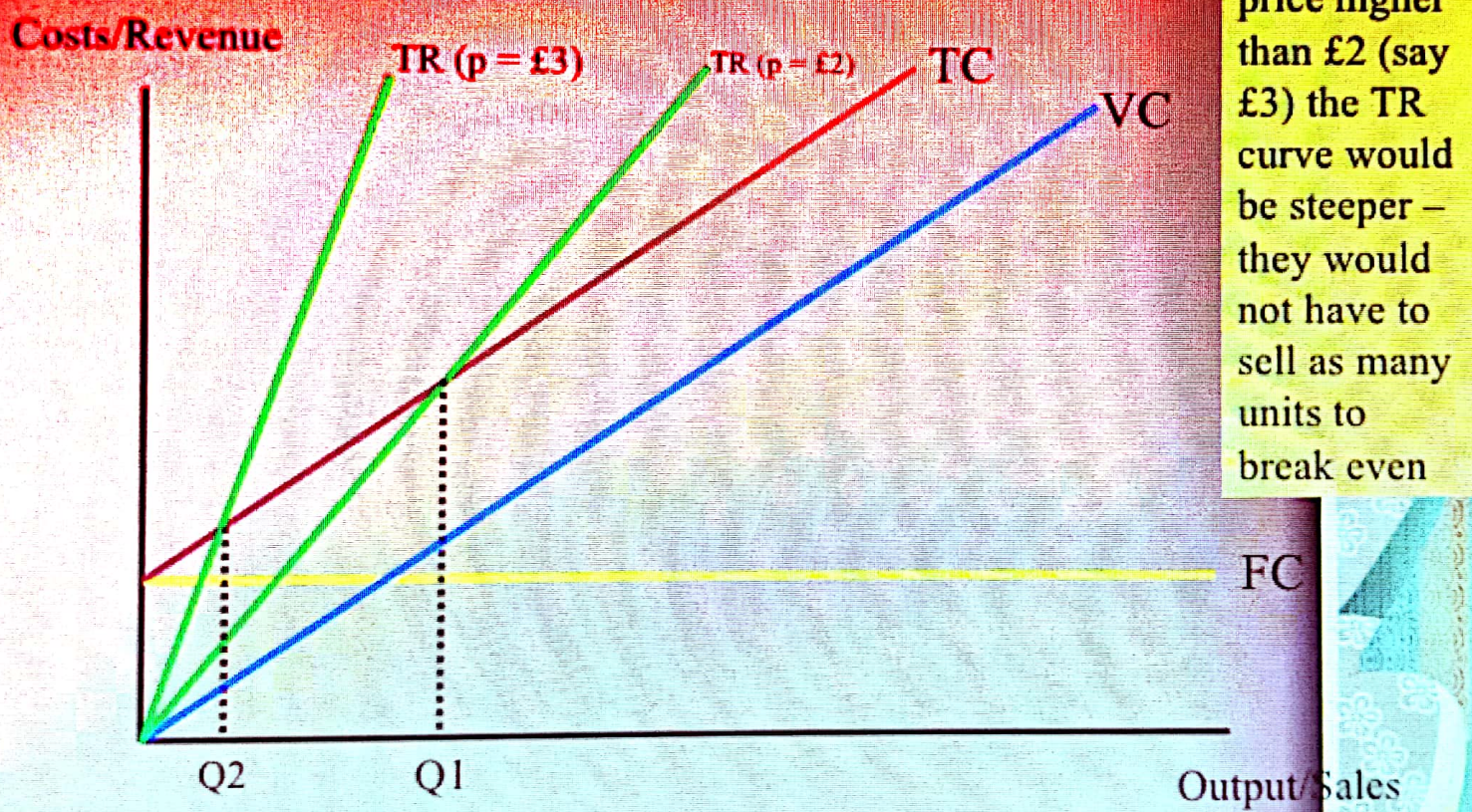
Break-Even Analysis

Costs/Revenue



The Break-even point occurs where total revenue equals total costs – the firm, in this example would have to sell Q1 to generate sufficient revenue to cover its costs.

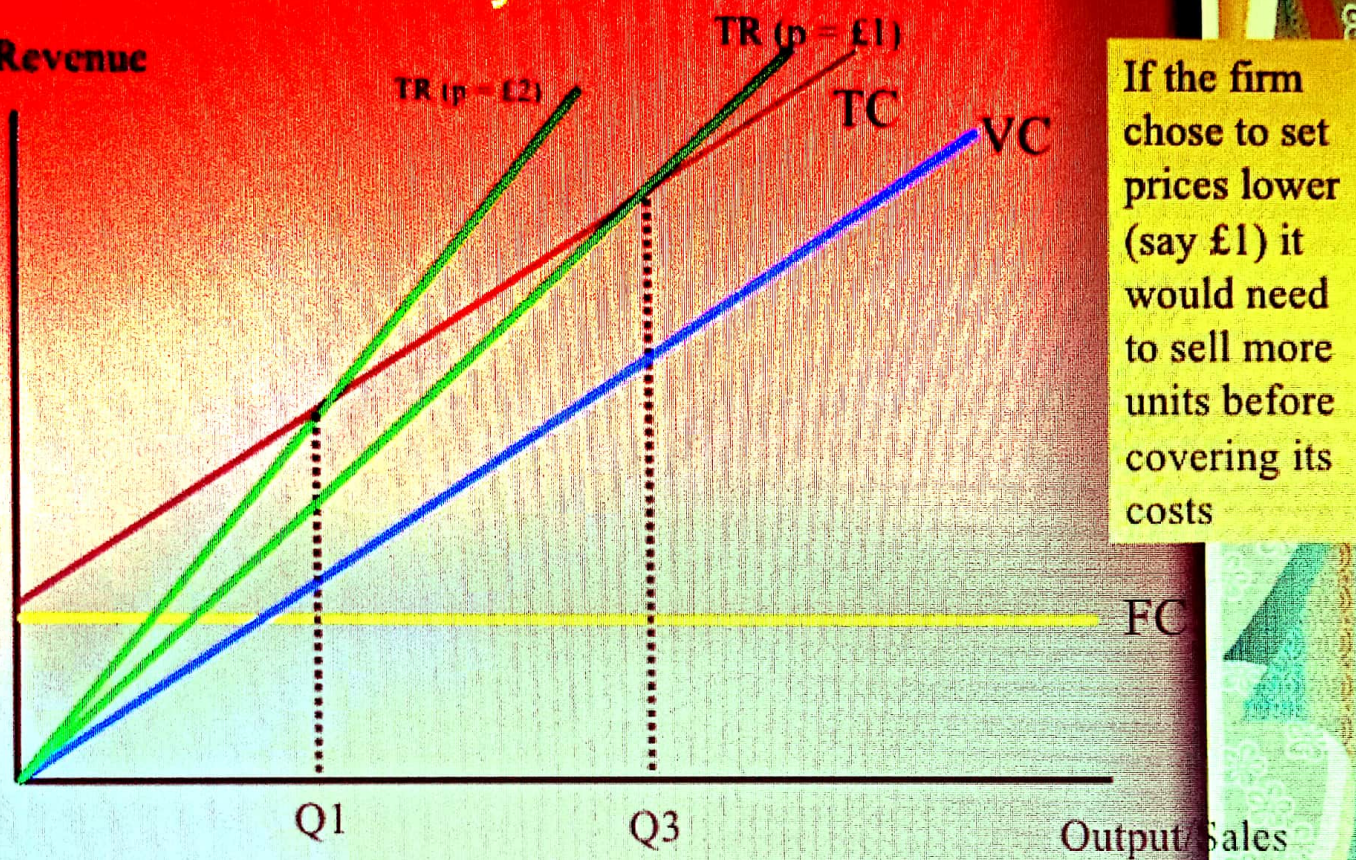
Break-Even Analysis



If the firm chose to set price higher than £2 (say £3) the TR curve would be steeper – they would not have to sell as many units to break even

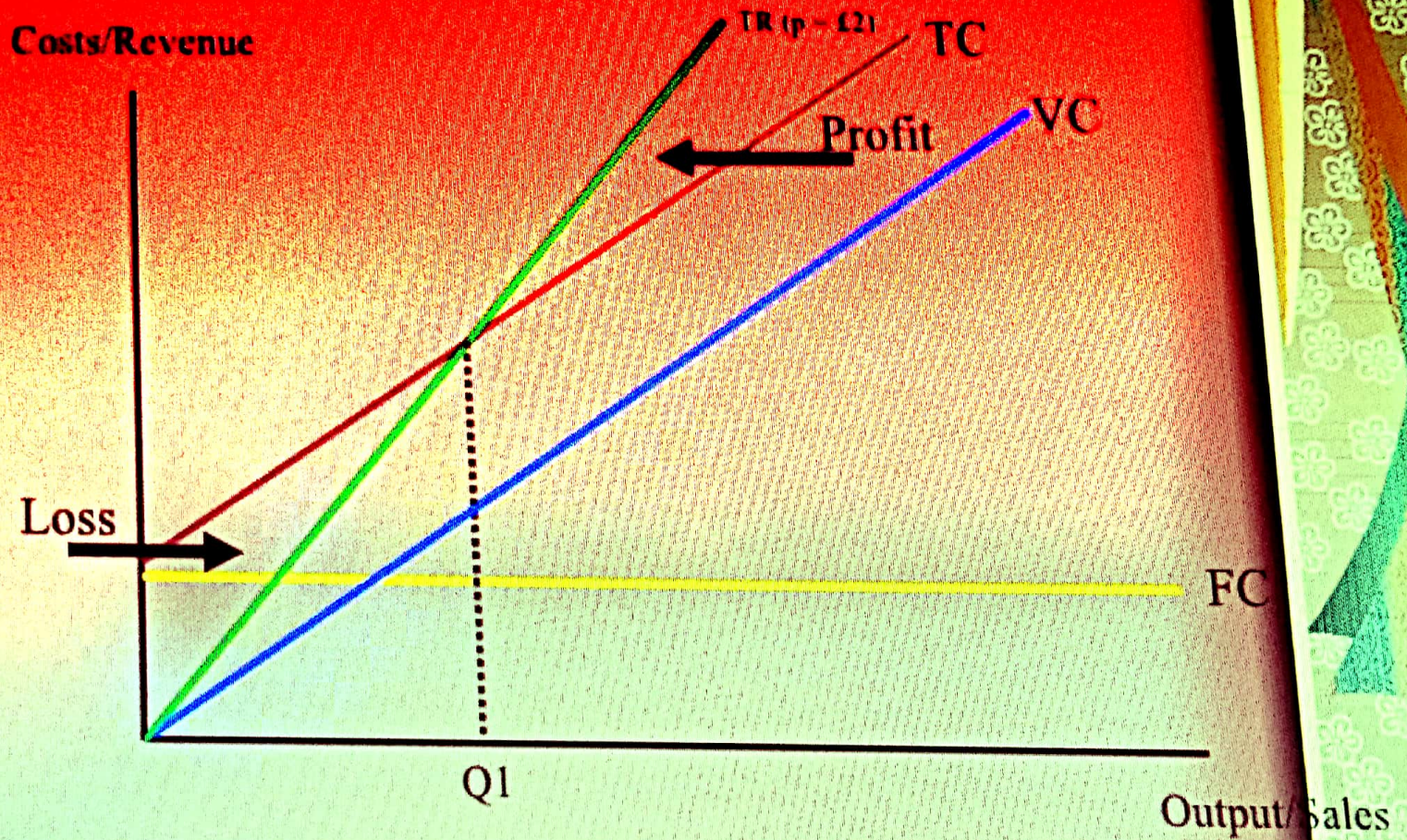
Break-Even Analysis

Costs/Revenue



If the firm chose to set prices lower (say £1) it would need to sell more units before covering its costs

Break-Even Analysis



USES OF BREAK EVEN POINT

- Helpful in deciding the minimum quantity of sales
- Helpful in the determination of tender price
- Helpful in examining effects upon organization's profitability
- Helpful in deciding about the substitution of new plants
- Helpful in sales price and quantity
- Helpful in determining marginal cost

LIMITATIONS

- ❏ Break-even analysis is only a supply side (costs only) analysis, as it tells you nothing about what sales are actually likely to be for the product at these various prices.
- ❏ It assumes that fixed costs (FC) are constant
- ❏ It assumes average variable costs are constant per unit of output, at least in the range of likely quantities of sales.
- ❏ It assumes that the quantity of goods produced is equal to the quantity of goods sold (i.e., there is no change in the quantity of goods held in inventory at the beginning of the period and the quantity of goods held in inventory at the end of the period.
- ❏ In multi-product companies, it assumes that the relative proportions of each product sold and produced are constant.