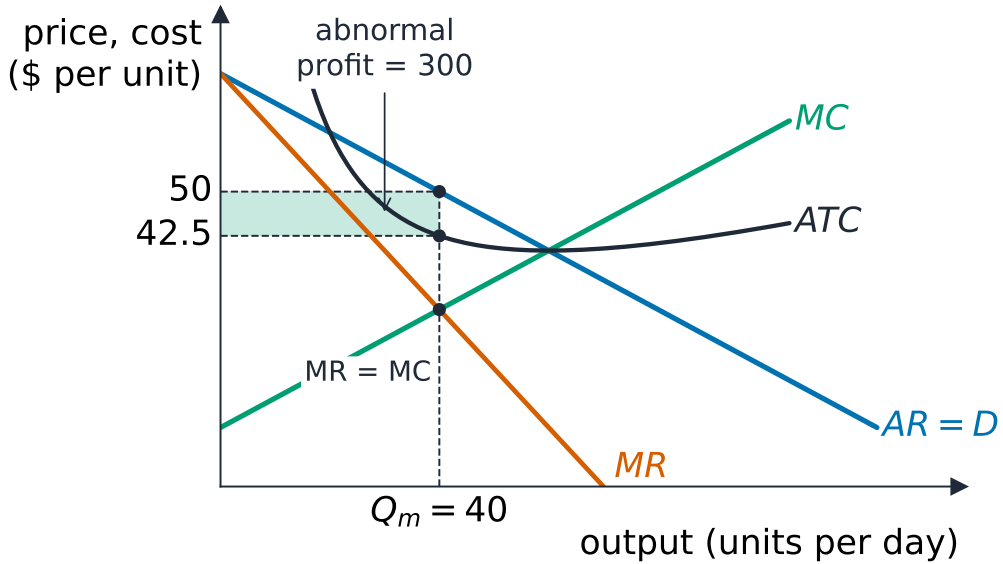
Exercise walk-through

4.2
Costs, revenue, profit and perfect competition

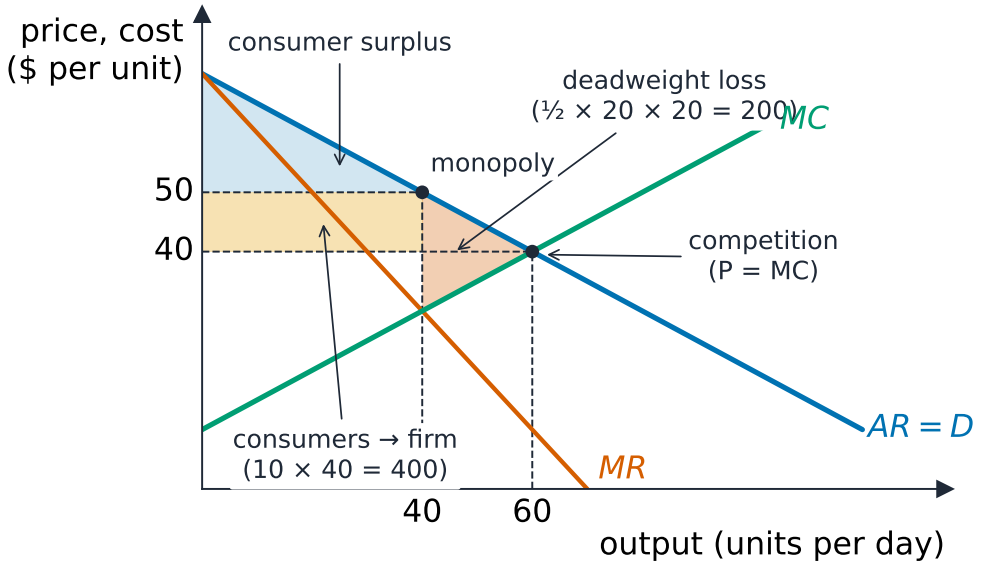
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Figure: Monopoly



- The monopolist produces where MR = MC and sets the price from the demand curve
- Match each part of the diagram to the text.

Figure: Monopoly ·



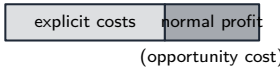
- Compared with competition, monopoly takes 400 from consumers and destroys 200 of welfare
- Read the axes and units first.

Government responses to market power

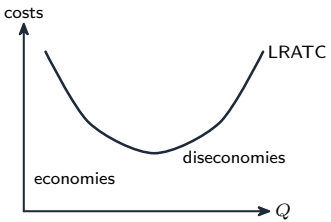
- **Competition law** : bans cartels and the abuse of a dominant position, and can block **mergers** that would create too much power. In 2017 the European Commission fined Google 2.42 billion euros for favouring its own shopping service in search results.
- **Regulation**: price caps and quality targets for natural monopolies such as water and electricity.
- **Fines** that are large enough to make breaking the law unprofitable.

Exercises 2.1·2.2

2.1 Define **normal profit**. [2]

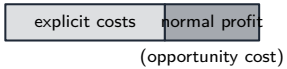


2.2 State **two** sources of economies of scale. [2]



Exercises 2.1·2.2

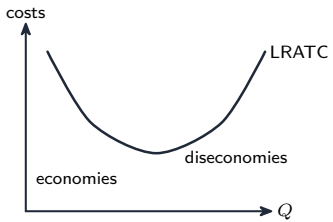
2.1 Define **normal profit**. [2]



2.1

the minimum profit needed to keep a firm in its current industry; when total revenue equals total economic cost, including opportunity cost

2.2 State **two** sources of economies of scale. [2]



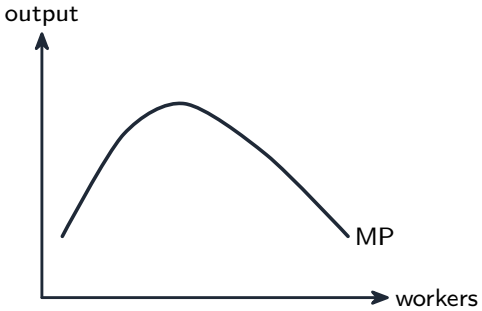
2.2

any two: bulk buying of inputs at lower prices; specialization of workers and managers; cheaper borrowing for large firms (financial); large, efficient machines (technical)

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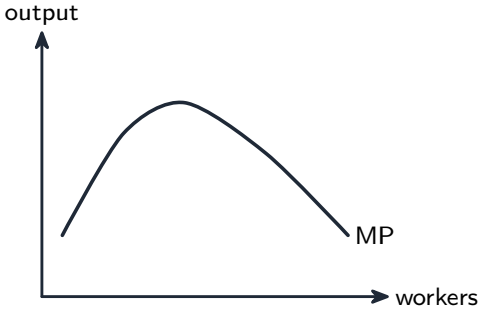
Exercise 2.3

2.3 Explain why a firm's marginal cost curve eventually rises in the short run. [4]



Exercise 2.3

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2.3

in the short run at least one factor, e.g. capital, is fixed; as more workers are added, each has less capital to work with; so after a point each extra worker adds less output: diminishing marginal returns; each extra unit of output then needs more labour, so its cost (MC) rises

Exercise 2.4

2.4 The table shows the total cost ($) of a firm in perfect competition. The market price is $12.

Calculate the profit-maximizing output and the profit. [3]

Q	0	1	2	3	4	5
TC	10	18	24	32	44	60

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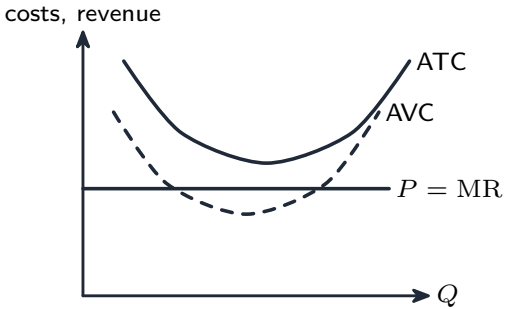
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2.4

MC: $8, 6, 8, 12, 16$; MC = MR = \$12 at $Q = \mathbf{4}$; profit $= 48 - 44 = \$\mathbf{4}$

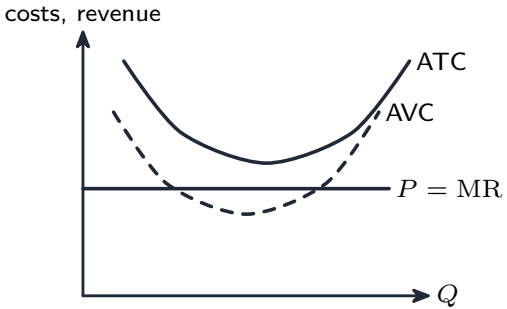
Exercise 2.5

2.5 A firm's price is \$5, its AVC is \$4 and its ATC is \$6. Explain whether it should continue to produce in the short run. [3]



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2.5

the price is below ATC, so it makes a loss; but the price is above AVC, so it covers all variable costs and part of its fixed costs; shutting down would mean losing all fixed costs, so it should continue in the short run

Exercise 3.1 (a)

3.1 A new technology lowers costs for all firms in a perfectly competitive industry.

(a) Using diagrams, explain how the industry moves from short-run abnormal profit to long-run equilibrium. [6]

[[drawlines:6]]

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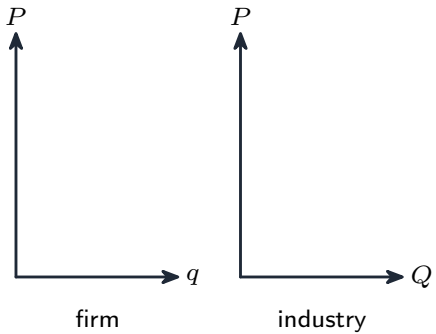
[[drawlines:6]]

(a) lower costs shift the firm's MC and ATC down; at the old price, P > ATC: abnormal profit, shaded; no barriers to entry, so new firms enter; industry supply shifts right and price falls; entry continues until P = minimum ATC: normal profit only; correctly labelled side-by-side firm and industry diagrams

Exercise 3.1 (b)

3.1 A new technology lowers costs for all firms in a perfectly competitive industry.

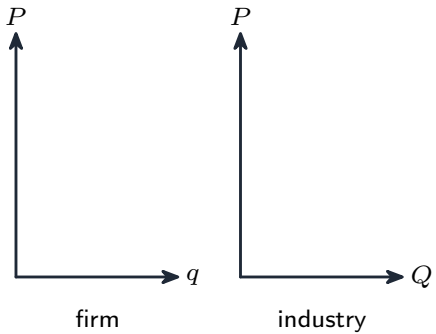
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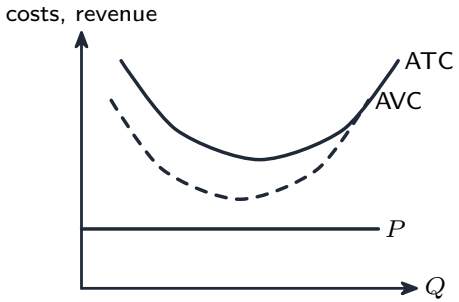


(b) P = MC, so the value of the last unit to consumers equals its cost: allocative efficiency; output at minimum ATC: productive efficiency

Exercise 3.2

3.2 A small farm in a competitive market sells corn at a price below its average variable cost.

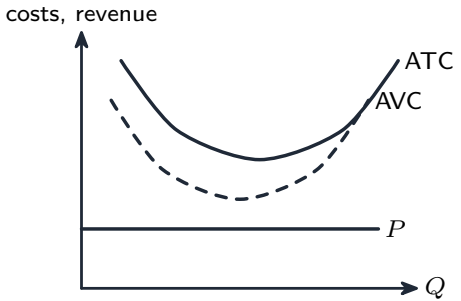
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Exercise 3.2

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3.2

if it produces, revenue does not cover variable costs; so every unit adds to the loss; if it shuts down, the loss is only its fixed costs; producing would give a loss larger than fixed costs, so shutting down minimizes the loss