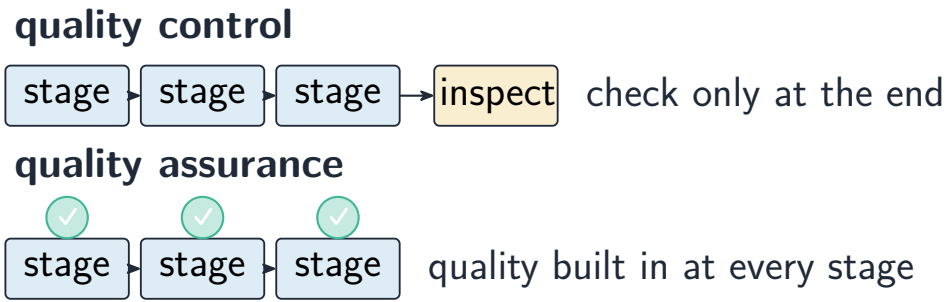
Exercise walk-through

9.2
Quality management

A-Level Business

Managing quality



Quality is how well a product meets the customer's needs.

- **quality control** – check at the end
- **quality assurance** – build in at every stage
- **TQM** – everyone owns quality
- **benchmarking** – copy the best

Why quality matters, and how it is managed

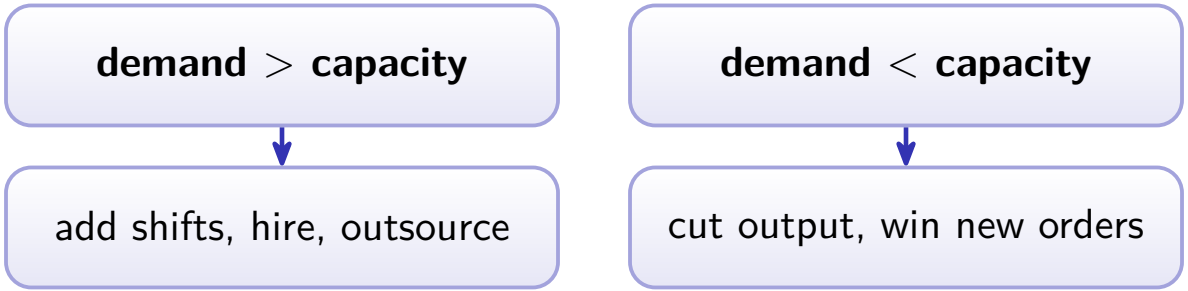
quality	how well a product meets the customer's needs – not how expensive it is
what good quality wins	repeat custom, a higher price, a protected brand, and fewer returns
quality control	inspecting at the end and removing faulty goods – the waste is already made
quality assurance	building checks into every stage to stop faults happening
TQM	total quality management: every employee responsible for quality, aiming at zero defects
the cost	assurance and TQM need training and cultural change, and neither is quick

> Control finds the fault; assurance prevents it. The saving is in the units that were never made wrong.

Lean production

Lean production makes products with the least possible **waste** – of time, materials, space and effort.

Capacity management and technology



Capacity management matches output to demand; new **technology** (automation, data) lifts output, quality and cost together.

A-Level Business

Exercises 2.1–2.3

2.1 State the difference between *quality control* and *quality assurance*. [2]

2.2 Define the term *total quality management (TQM)*. [2]

2.3 State two benefits to a business of producing good-quality products. [2]

Exercises 2.1–2.3

2.1 State the difference between *quality control* and *quality assurance*. [2]

2.1

- quality control checks finished products and removes faulty ones at the end; quality assurance builds quality into every stage to prevent faults (2 for a clear difference; 1 for a partial idea)

2.2 Define the term *total quality management (TQM)*. [2]

2.2

- an approach in which every worker takes responsibility for quality, aiming for zero faults (2 for a clear definition; 1 for a partial idea)

2.3 State two benefits to a business of producing good-quality products. [2]

2.3

- any two of: repeat custom; can charge a higher price; protects the brand; lower cost of waste and returns (1 + 1)

Exercises 3.1·3.2

3.1 Explain one benefit to a business of producing high-quality products. [3]

3.2 Analyse two benefits to a business of using **quality assurance**. [8]

Exercises 3.1·3.2

3.1 Explain one benefit to a business of producing high-quality products. [3]

3.1

- *[3]* **AO1** 1 – name a benefit (repeat custom; higher price; less waste; stronger brand). **AO2** up to 2 – develop it, e.g. good quality wins repeat customers
- steady sales
- a stronger, more valuable brand (2 developed / 1 limited)

3.2 Analyse two benefits to a business of using **quality assurance**. [8]

3.2

- *[8]* For **each** of two benefits: **AO1** 1 + **AO2** 1 + **AO3** up to 2. Example chains – *fewer faults*: quality built in at each stage
- faults caught early, not at the end
- less waste and rework. *Better reputation*: consistent quality
- customers trust the brand
- repeat sales and loyalty. Maximum 4 per benefit, 8 total

Exercise 3.3

3.3 A manufacturer with a quality problem is choosing between **quality control** and **TQM**. Evaluate which it should use. [12]

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3.3

- *[12]* **AO1** 2 / **AO2** 2 / **AO3** 2 / **AO4** up to 6. **Quality control:** simple and cheap to start, faults caught before sale – but it finds faults late, after money is spent, and wastes rejected output. **TQM:** prevents faults and involves all staff
- lower long-run cost and higher quality – but it needs training, a culture change and time. Judgement: TQM is usually better long term, but a firm with a quick problem or limited resources may start with control – the choice depends on the cost of faults and the firm's ability to change its culture

Exercise 3.4

3.4 A fictional firm currently replaces 40 defective products monthly at \$10 each. A preventive programme costs \$180 monthly and is predicted to leave 15 defective products. Calculate the predicted saving and give one reason to review the prediction before adopting the programme. [4]

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Current cost $40 \times 10 = \$400$; proposed cost $180 + 15 \times 10 = \$330$; predicted saving \$70; a contextual limitation, such as uncertain defect reduction or omitted customer/production effects, with explanation.