



● **production** N-UNCOUNT

Production is the process of manufacturing or growing something in large quantities. **Production** is also the amount of goods manufactured or grown by a company or country.

That model won't go into production before late 1990.
We needed to increase the volume of production.

● **manufacture** (manufactures, manufacturing, manufactured)

1 VERB

To **manufacture** something means to make it in a factory, usually in large quantities.

They manufacture the class of plastics known as thermoplastic materials.
We import foreign manufactured goods.

2 N-UNCOUNT

The **manufacture** of a product is the work involved in making it.

...the manufacture of nuclear weapons.
...celebrating 90 years of car manufacture.

● **manufacturing** N-UNCOUNT

manufacturer (manufacturers) N-COUNT

Manufacturing is all the processes involved in making a product. A **manufacturer** is a business or company which makes goods in large quantities to sell.

...the manufacturing of a luxury type automobile.
...the world's largest doll manufacturer.

● **manufacturing facility** (manufacturing facilities) N-COUNT

A **manufacturing facility** is a more formal word for a factory.

The company has a sales and marketing office in St Albans, as well as a manufacturing facility near Glasgow.

● **factory** (factories) N-COUNT

plant (plants) N-COUNT

works N-COUNT-COLL

A **factory** is a large building where machines are used to make large quantities of goods. A **plant** is a factory or a place where power is produced. A **works** is a place where something is manufactured or where an industrial process is carried out.

Works is used to refer to one or to more than one of these places.

He owned furniture factories in New York State.
The plant provides forty per cent of the country's electricity.
The steel works, one of the landmarks of Stoke-on-Trent, could be seen for miles.
...the works canteen.

● **output** N-UNCOUNT

Output is used to refer to the amount of something that a person or thing produces.

Manual workers need a good breakfast for high-energy output.
Statistics show the largest drop in industrial output for ten years.

● **capacity** N-UNCOUNT

full capacity N-UNCOUNT

spare capacity N-UNCOUNT

The **capacity** of something such as a factory, industry, or region is the quantity of things that it can produce or deliver with the equipment or resources that are available. If a factory or industry is working at **full capacity**, it is using all its available resources. If there is **spare capacity**, it is not using all its available resources.

The region is valued for its coal and vast electricity-generating capacity.
Bread factories are working at full capacity.
Building the new model at one of its American factories with spare capacity would have been cheaper.

● **lean** ADJ

lean manufacturing N-UNCOUNT

lean production N-UNCOUNT

just-in-time (JIT) manufacturing N-UNCOUNT

just-in-time (JIT) production N-UNCOUNT

If you describe an organization as **lean**, you mean that it has become more efficient and less wasteful by getting rid of staff, or by dropping projects which were unprofitable. **Lean manufacturing** and **lean production** are manufacturing methods which aim to reduce wastage, for example by keeping stocks low and by working more flexibly. **Just-in-time manufacturing** or **just-in-time production** is a manufacturing method which aims to reduce wastage by keeping stocks low and by producing goods only when they are required. The abbreviation **JIT** is also used.

The value of the pound will force British companies to be leaner and fitter.
...efficiency-raising techniques such as lean manufacturing.
...Japanese-style lean production techniques.
...Japanese firms which understood customers better and pioneered more efficient just-in-time manufacturing.
If you can achieve just-in-time production, everyone's holdings of stocks can be kept to a minimum, with immense savings in capital.
...examples of genuine JIT operations.

● **chain of production** N-SING

The **chain of production** is all the stages of production that a product passes through before it is passed to a consumer.

The rationale for green detergents was that they would prevent discharges of phosphate into rivers. But there are other environmental costs attached to washing powders, earlier in the chain of production.

➔ **primary sector:** Topic 2.2; **industrial sector:** Topic 2.2; **service sector:** Topic 2.2; **producer:** Topic 4.4; **product:** Topic 5.2; **produce:** Topic 5.2; **mass production:** Topic 5.5; **stock:** Topic 6.3; **low-cost centre:** Topic 10.4



PRACTISE YOUR VOCABULARY

1 Use the words in the box to complete the paragraph.

factory production process lean production production just-in-time

If companies adopt lean manufacturing or _____ techniques they are interested in making the _____ more efficient. They try to keep all inputs to the process to a minimum. This could mean using the fewest workers they can, cutting down on the amount of raw materials needed, or using as little _____ space as possible, for example. One of the operations that is central to lean manufacturing is _____ production. This manufacturing method aims to reduce costs by keeping stocks low. Instead of keeping stocks in the warehouse, the company asks its suppliers to make frequent deliveries so that they can be used straight away. _____ can then exactly match the amount of goods required, so that the company does not incur costs on warehousing finished goods.

2 Which word is the odd one out in each line?

- | | | |
|-----------------|------------------------|--------------|
| a manufacturing | factory | production |
| b plant | manufacturer | factory |
| c works | manufacturing facility | output |
| d output | producer | manufacturer |
| e produce | manufacture | works |

3 Are the sentences true or false?

- | | True | False |
|---|--------------------------|--------------------------|
| a The capacity of a factory refers to how many products it can produce in a given time. | <input type="checkbox"/> | <input type="checkbox"/> |
| b A company operating with spare capacity is not making as much profit as it could. | <input type="checkbox"/> | <input type="checkbox"/> |
| c A company using lean production techniques is likely to have a large warehouse full of finished products. | <input type="checkbox"/> | <input type="checkbox"/> |
| d The JIT manufacturing system is a part of the lean production approach. | <input type="checkbox"/> | <input type="checkbox"/> |
| e Car production is usually carried out at a plant. | <input type="checkbox"/> | <input type="checkbox"/> |
| f A factory operating at full capacity is operating efficiently. | <input type="checkbox"/> | <input type="checkbox"/> |

4 Fine Field, a company which manufactures garden tools, uses the JIT system of manufacturing. What do you know about the following, therefore?

- | | |
|--|---|
| a The amount of stock Fine Field hold | c Bulk buying (buying in very large quantities) |
| b The amount of space available in their factory | d The costs of holding stock in their warehouse |

5 Read the paragraph and answer the questions.

The Chain of Production

The primary, industrial (or secondary) and service (or tertiary) sectors are linked together by a chain of production. For example, the cocoa-bean growers of Africa form part of the primary sector. They sell their product worldwide, and some of their beans are bought by a UK-based company. This company operates in the secondary, or industrial sector manufacturing chocolate from the beans. Many restaurants, or companies in the tertiary or service sector buy chocolates from the company to give to their customers along with a cup of coffee after their meal.

- a In which sector (primary, industrial or service) does each of the following operate?
- i The UK-based company
 - ii African cocoa-bean growers
 - iii Restaurants/companies buying chocolate products for their customers
- b What is the 'chain of production'?