

1.11 Inside a computer

A. Processors and memory

chips

dual core

megabytes

megahertz

motherboard

processor

speed

upgraded

The "brain" of a computer is the ¹ processor. Most of these are made by Intel and AMD, and are sometimes referred to as "² chips". The fastest processors are ³ dual core, which means that there are two processors working together. The ⁴ speed of a processor is measured in ⁵ megahertz, which is usually written as MHz.

A computer's memory is measured in ⁶ megabytes. If a computer has 1,024 megabytes of memory, and the memory type is SDRAM, this is written as 1,024 MB SDRAM, and is pronounced "a thousand and twenty-four megabytes ess-dee-dram".

The processor and memory modules are located on the ⁷ motherboard. Changing a computer's processor is not generally practical, but the memory can usually be ⁸ upgraded.

El "cerebro" de un ordenador es el **procesador**. La mayoría de ellos son fabricados por Intel y AMD, y a veces se denominan "**chips**". Los procesadores más rápidos son de **dual core**, lo que significa que hay dos procesadores trabajando juntos. La **velocidad** de un procesador se mide en **megahertz**, que suele escribirse como MHz.

El procesador y los módulos de memoria se encuentran en la **placa base**. Cambiar el procesador de un ordenador generalmente no es práctico, pero la memoria suele poder **actualizarse**.

B. Power

disconnect

desconectado

fan

cooler / ventilador

mains electricity

electricidad de la red

overheating

sobrecalentamiento

shock

choque

spikes

picos

supply

alimentación

surge protector

protector de
sobretensión

transformer

transformador

1. Laptops are powered by batteries or mains electricity.

Los ordenadores portátiles se alimentan con baterías o con la **red eléctrica**.

2. Mains electricity is converted to lower voltage by a

transformer.

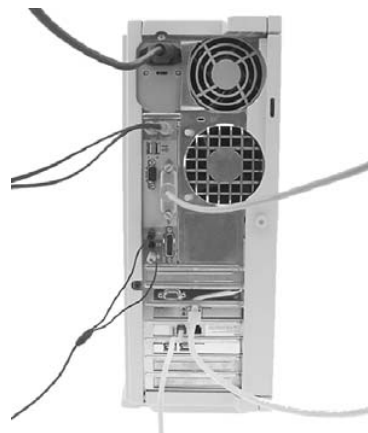
La electricidad de la red se convierte a un voltaje más bajo mediante un **transformador**.

3. A surge protector protects electronic equipment from damage caused by power spikes.

Un **protector de tensión** protege los equipos electrónicos de daños causados por los **picos de tensión**.

4. If you remove the cover from a computer, make sure you disconnect the electricity supply. Otherwise, you may get an electric shock.

5. The computer is cooled by a fan. This prevents the processor from overheating.



1.12 Data storage

burn	arrancar / crear	capacity	capacidad	card	tarjeta	drawer	cajón / compartimento
eject	expulsar	free space	espacio libre	hard drive	disco duro	stick	(pendrive de antes)

- The data and applications on your computer are stored on the hard drive.
- To run this application you need at least 50MB of free space on your hard drive.
- My computer's hard drive has a capacity of 120GB.
- Do you like this CD? I can burn you a copy if you want.
- The opposite of "Insert the DVD" is "eject the DVD".
- I can't eject the CD. I think the drawer's stuck.
- Digital cameras usually store pictures on a memory card or a memory stick.



Which do you think is the best solution for each problem? (More than one solution is possible for some of problems.)

Diagram illustrating solutions for various computer problems:

- 1. I want to make a copy of a music CD.** (Spanish: Quiero hacer una copia de un CD de música) → **a. You need an external hard drive.** (Spanish: Necesitas un disco duro externo)
- 2. I want to store some files. I may need to update them in the future.** (Spanish: Quiero almacenar algunos archivos. Puede que tenga que actualizar en el futuro.) → **b. Use a CD-R.** (Spanish: Usa un CD-R)
- 3. I want to back up data from my computer. I want to update it every day.** (Spanish: Quiero hacer una copia de seguridad de los datos de mi ordenador. Quiero actualizarla cada día) → **c. Try a USB flash drive.** (Spanish: Prueba con una unidad flash USB)
- 4. My computer's having problems with reading and writing CDs.** (Spanish: Mi computadora tiene problemas para leer y escribir CDs) → **d. Perhaps you need a new internal CD drive.** (Spanish: Quizás necesite una nueva unidad de CD interna)
- 5. I want to add 100MB of extra storage to my computer.** (Spanish: Quiero agregar 100 MB de almacenamiento extra a mi PC) → **e. Put them on a CD-RW.** (Spanish: Ponelo en un CD-RW)
- 6. I want to send a copy of a small file to a friend. He has an old computer.** (Spanish: Quiero enviar una copia de un archivo chico a un amigo. El tiene una PC vieja) → **f. Perhaps you need to defragment the hard drive.** (Spanish: Tal vez necesite desfragmentar el disco duro)
- 7. My computer's running slowly.** (Spanish: Mi computadora esta lenta) → **g. You could put it on a floppy disk.** (Spanish: Puedes ponerlo en un disquete.)

1.13 Connectivity

1. Scanners, printers and webcams are peripherals.
a. extras b. peripherals c. externals
2. Add extra USB ports to your computer....
a. ports b. doors c. windows
3. ... with a USB hub.
a. centre b. point c. hub
4. ADSL is also known as broadband.
a. wideband b. broadband c. longband
5. I want to get a high-speed ADSL modem.
a. quick-speed b. fast-speed c. high-speed
6. The internet is much faster with a broadband connection than with dial-up.
a. dial-up b. phone-up c. call-up
7. With a wireless router, you can share your broadband connection with other users.
a. divide b. combine c. share
8. This wire's too short. I need an extension cable.
a. extended b. extension c. extender
9. You can connect a USB plug to a PS/2 port by using an adaptor.
a. an adaptor b. a bridge c. a connector

Bluetooth®

**data
signals**

**developed
wireless**

**devices
telecommunications**

enabled

Bluetooth® technology enables 1 wireless communication between 2 devices such as laptop computers, mobile phones and PDAs. Bluetooth® 3 enabled devices use short-range radio 4 signals to exchange 5 data quickly and easily. The technology was 6 developed by a group of computer and 7 telecommunications companies including IBM, Intel, Nokia and Ericsson.

1.14 Networks

LAN

intranet

Local

log onto

network card

satellite

server

terminals

WAN (Wide Area Network)

LAN is pronounced "lan", and stands for 1 Local Area Network. In a typical LAN, there is a central network 2 server which supports a number of 3 terminals. Users have to 4 log onto the network server. Pages of information that can be viewed within a LAN are called an 5 intranet. A number of LANs connected to each other via 6 satellite or other form of communication are called a 7 WAN. To be used as network terminals, each computer needs to have a 8 network card installed.

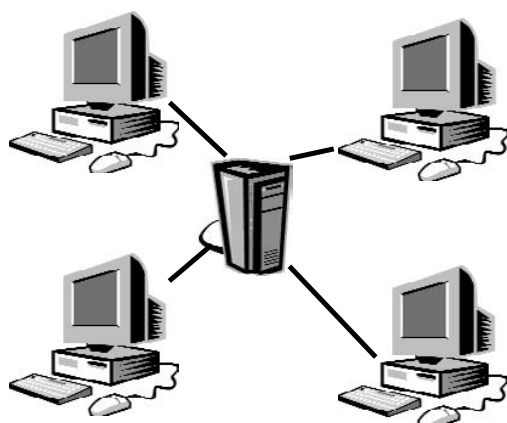
Network topologies

line (or bus)

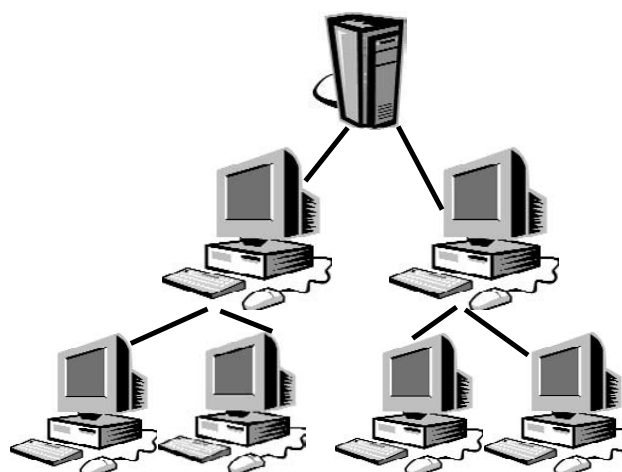
ring

star

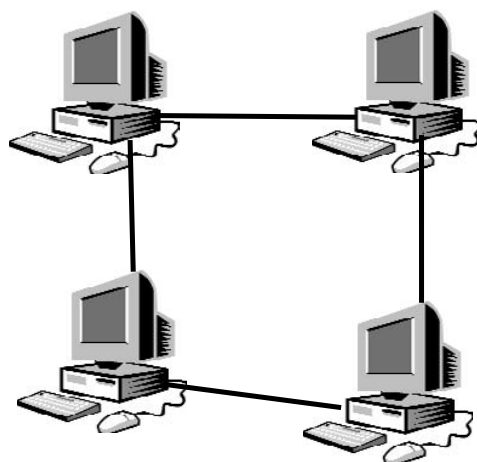
hierarchical



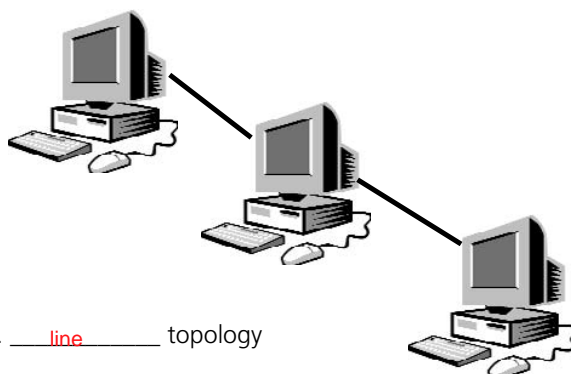
1. star topology



2. hierarchical topology



3. ring topology



4. line topology

1.15 Electronic payments

A. EPOS and EFTPOS

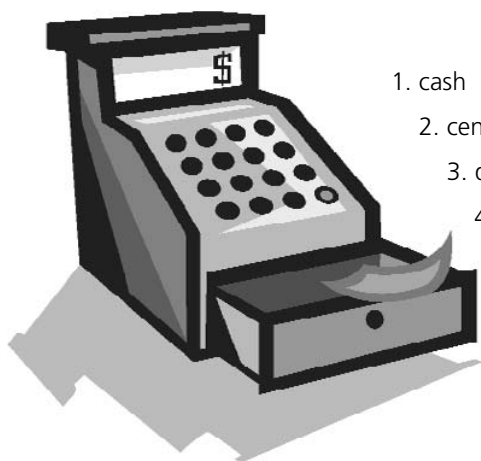
Cross out the incorrect word

EPOS (electronic point of sale) terminals are **cash** / **money** registers found in retail **openings** / **outlets** such as shops and restaurants. They are connected to a **central** / **centre** computer, and data about **objects** / **goods** and services sold is entered into the terminals via keyboards, barcode readers, **touch** / **finger** screens etc. They are useful for stock management, and can produce itemised bills and **receipts** / **recipes**.

EFTPOS (electronic funds transfer point of sale) can also transfer **cash** / **funds** directly from the customer's bank account via a **debit** / **paying** card. They are now more common than EPOS terminals.

B. Word partnerships

Match the words.



- | | | |
|------------|---|-----------------|
| 1. cash | → | a. and services |
| 2. central | → | b. card |
| 3. debit | → | c. computer |
| 4. funds | → | d. of sale |
| 5. goods | → | e. outlet |
| 6. point | → | f. register |
| 7. retail | → | g. screen |
| 8. touch | → | h. transfer |

C. Plastic

Match the cards with the phrases.

- | | | |
|-----------------|---|-----------------------------------------------------------|
| 1. credit card | → | a. Buy now, pay now. |
| 2. debit card | → | b. Buy now, pay the bank later. |
| 3. cash card | → | c. Buy now, pay the shop later. |
| 4. loyalty card | → | d. Spend, and get some money or goods back from the shop. |
| 5. store card | → | e. Take money out of a cash machine. |

1.16 Review crossword

All the words can be found in Units 1.1 to 1.15

Across

- 1. A camera connected to the internet. (6 letters) **webcam**
- 6. To send an SMS message. (4) **email**
- 9. The most common page orientation. (8)
- 10. A computer's "brain". (9)
- 11. It prevents a computer from overheating. (3)
- 14. A connection without wires. (7)
- 15. The place where you put a plug. (6)
- 20. Processor speeds are measured in these. (9)
- 21. The cheapest type of printer. (6)
- 22. Lift this before you use your scanner. (3)
- 24. The shop assistant does this to your credit card. (5)
- 26. The strip on the back of a credit or debit card. (8)

Down

- 2. When it's dead, recharge it or replace it. (7)
- 3. You speak into this. (10)
- 4. The mouse moves on this. (3)
- 5. A computer, printer and scanner on a desk with a chair. (11)
- 7. Laser printers use this instead of ink. (5)
- 8. A design (for example, a type of keyboard) which is better for your body. (9)
- 12. An image on a screen is made up of thousands of these. (6)
- 13. Printers, scanners, webcams etc. (10)
- 16. A very large computer which never moves. (9)
- 17. A photo or drawing. (5)
- 18. You need to change or refill this when your printer runs out of ink. (9)
- 19. Two or more computers connected together. (7)
- 23. The slowest form of internet connection. (4, 2)
- 26. Image resolution is usually measured in this. (3)

