

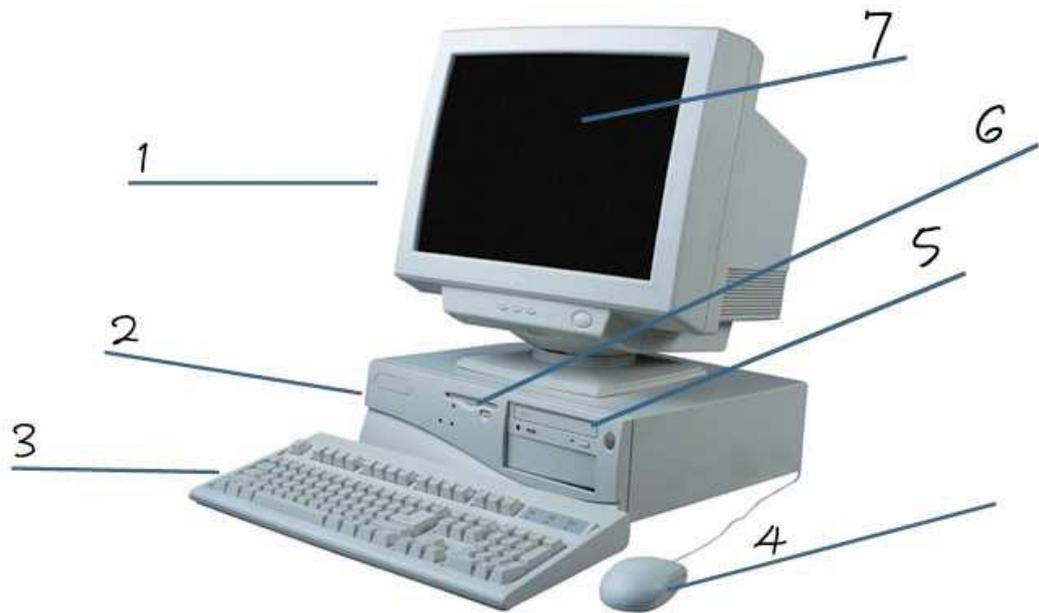
Worksheet 1: Computer hardware components 1.

Name:
Mark:

- **Goals:**
 - Use and configure computer equipment, identifying its components and functions.
- **Time:**
 - 3 sessions.
- **Resources:**
 - <http://lifehacker.com/5828747/how-to-build-a-computer-from-scratch-the-complete-guide>
 - <http://www.ebuyer.com/>
 - <http://www.differencebetween.net/technology/difference-between-sram-and-dram/>
- **How to return this worksheet:**

Rename this word document adding your name at the end. When you have completed the exercise, upload it to DROPBOX
- **Tasks:**
 1. Label the ***visible*** parts of a computer (see picture below):

1	M
2	C
3	K
4	M
5	O
6	F
7	S



2. What are the main parts ***inside*** of a computer? Hint: Use the links provided in the resources.

	Hardware element	Image	Brief Description
1	Monitor		
2			The case is the usually plastic or metal housing that contains the computer's main parts such as the motherboard, hard drive, etc.
3			
4			
5			An optical drive, more commonly known as a CD or DVD drive, is what you'll use to read CDs, DVDs, and even Blu-Ray discs.

6	Floppy disk		
7	Screen		

CPU.

Answer following questions about this component.

3. Fill in the gaps:

- i. CPU is the acronym for _____
- ii. The CPU is the _____ of the computer. *Hint: part of the body.*
- iii. The main CPU manufacturers are: A_____ and I_____

4. **Mark** which of the following features correspond to a CPU:

- Capacity (GB)
- Core frequency
- Expansion slots
- Socket
- Number of cores
- Type of LAN connection
- Speed
- Number of USB ports
- Heatsink
- Retail boxed processor

5. Translate into spanish and explain briefly the function of the features you have chosen in the previous task .

- N_____:

- S_____:

6. Complete the “Family” for the Intel processors:
- i. Intel Core i_
 - ii. Intel Core i_
 - iii. Intel Core i_
 - iv. Intel Core i_
 - v. Intel
 - vi.
7. Search on <https://www.ebuyer.com/> for a model of each Family (whatever), taking note of the main characteristics and Price. *Note: you should do a table like this for each processor:*

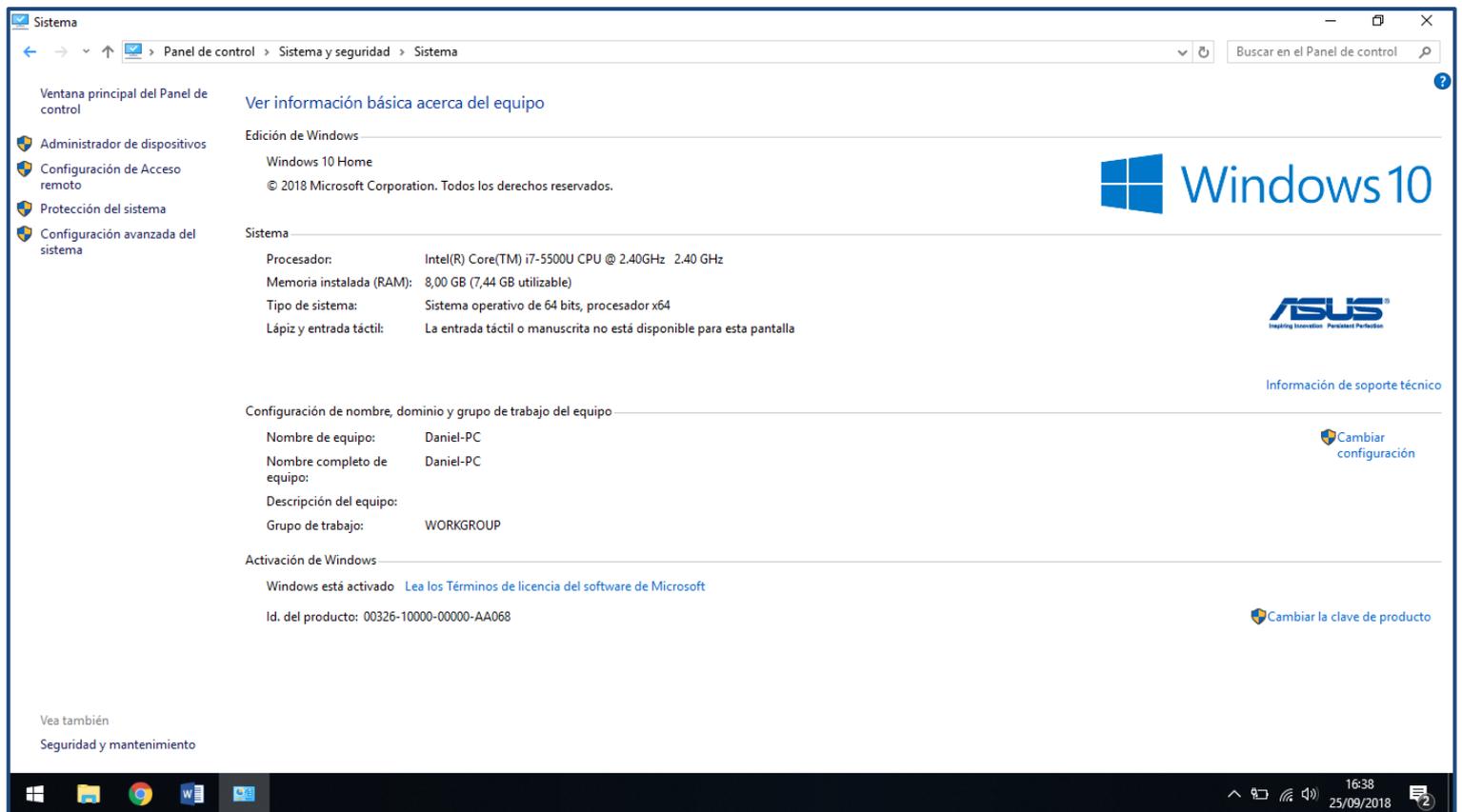
Family	
Model	Intel Core i7-8700K
Frequency	3.70GHz
Number of cores	6
Socket	LGA1151 Processor
What include (Retail boxed CPU / Heatsink and fan not included)	3.70GHz clock speed; 14nm Process; 12MB L3 Cache; Dual Channel DDR4 Controller; Integrated DX12 Graphics £ 395.76

Family	ADM
Model	AMD Ryzen 5 1600 6 Core AM4 CPU/Processor with Wraith Spire 95W cooler
Frequency	3.4 GHz Clock Speed, with Turbo up to 3.6 GHz
Number of cores	Six Core with 12 Threads
Socket	Socket type: Am4
What include (Retail boxed CPU / Heatsink and fan not included)	Cache: 3 mb/16 mb (l2/l3); Socket type: Am4; Thermal solution: Wraith spire cooler £ 294.99

Family	
Model	
Frequency	
Number of cores	
Socket	
What include (Retail boxed CPU / Heatsink and fan not included)	

Family	AMD
Model	
Frequency	
Number of cores	
Socket	
What include (Retail boxed CPU / Heatsink and fan not included)	

8. Write down four AMD CPU Series for desktop (just the name of the serie).
Hint: You can find the in the AMD webpage.
- i. AMD _
 - ii. AMD _
 - iii. AMD _
 - iv. AMD _
9. Could you check the type of CPU in the computer you are using? Hint: search in the internet how to check it in Windows.



10. Discuss about which one, Intel or AMD CPU is better or what are the main differences between them.

AMD vs Intel:

- Value:
- Gaming:
- Overclocking:

RAM.

Answer following questions about this component.

There isn't questions

11. Fill in the gaps:

- i. RAM is the acronym for _____
- ii. The translation of RAM into spanish is is
- iii. Be careful! It's common to listen: I'm running out of _____
M_____! When what is happening is that they are running out of speed

ICT

iv. RAM is also know as _____

12. There two types of RAM: SRAM and DRAM. Search for the main differences between them and fill in the gaps.

- a. SRAM is the acronym for _____ while DRAM is _____
RAM
- b. DRAM is _____ than SRAM
- c. SRAM use is _____.
- d. SRAM consumes _____ than DRAM
- e. SRAM is _____ than DRAM

13. Search for the different generations of SDRAM.

- ✓ SDRAM (_____):
- ✓ DDR SDRAM (_____):
- ✓ DDR3 SDRAM(_____):
- ✓ DDR4 SDRAM (_____):

14. Which SDRAM are the faster? Mention only a couple of them.

DDR SDRAM Standard	Internal rate (MHz)	Bus clock (MHz)	Prefetch	Data rate (MT/s)	Transfer rate (GB/s)	Voltage (V)
SDRAM	100-166	100-166	1n	100-166	0.8-1.3	3.3
DDR	133-200	133-200	2n	266-400	2.1-3.2	2.5/2.6
DDR2	133-200	266-400	4n	533-800	4.2-6.4	1.8
DDR3	133-200	533-800	8n	1066-1600	8.5-14.9	1.35/1.5
DDR4	133-200	1066-1600	8n	2133-3200	17-21.3	1.2

15. **Mark** which of the following features correspond to a RAM:

- Capacity.
- Core frequency
- Expansion slots
- Memory speed/frequency.
- Number of cores
- Number of pines.

16. Translate into spanish and explain briefly the function of the features you have chosen in the previous task .

ICT

✓ M_____

The two numbers often quoted first on memory module specifications -- for example, "DDRxxx/PCxxxx" -- indicate the maximum clock speed and maximum transfer rate the device can operate at -- and the higher the better.

✓ N_____ OF _____

The number of pins a memory module has indicates the number of connections it has to the motherboard -- and thus which motherboards it's compatible with. More pins means more data can be transferred at once, for faster operation overall.

17. Could you check the amount of RAM in the PC you are using?
(EXAMPLE:8GB)

YOUR PC: _____

Sistema	
Procesador:	Intel(R) Core(TM) i7-5500U CPU @ 2.40GHz 2.40 GHz
Memoria instalada (RAM):	8,00 GB (7,44 GB utilizable)
Tipo de sistema:	Sistema operativo de 64 bits, procesador x64
Lápiz y entrada táctil:	La entrada táctil o manuscrita no está disponible para esta pantalla

18. Fill in the gaps:

- i. The words in Spanish for motherboard are _P_____ B_____
- ii. The motherboard is used for _C_____ ALL THE OTHER COMPONENTS TO ONE ANOTHER, AND IS _____ UPON WHICH YOU BUILD EVERYTHING ELSE
- iii. The main motherboard manufacturers are: G_____ and A_____

19. Mark which of the following features correspond to a motherboard:

- Capacity.
- Core frequency
- Slots

ICT

- Memory speed/frequency.
- Socket

20. Translate into spanish and explain briefly the function of the features you have chosen in the previous task.

✓ S_____

Motherboards typically have three types of slots. Memory slots let you plug RAM modules into the computer. The more slots you have, the more memory you can add.

✓ S_____

choosing a compatible socket, the chipset on the motherboard will determine how quickly the computer can run, what additional features it supports and how much memory it can access.