2ESO, SECCIÓN BILINGÜE METALES

1. **What is the difference between metallurgy and siderurgy** ?

2. **Say if these statements about metals are true or false**

(Statement = afirmación)
(correct answer = + 0, 3 points // no answer = 0 points //
incorrect anwer = - 0,15 points)

- A metal can not be brittle and malleable at the same time----------→
- A metall can be hard and brittle at the same time----------→
- All metals have a ringing sound when they are hit.----------→
- Most metals are shiny----------→
- Copper and tinplate are alloys----------→
- Brass and Bronce are metals----------→
- A metal can not have a high tenacity and being brittle at the same time.->
- All alloys are ferric metals----------→
- A plastic and a metal could be an alloy ----------→
- We can check how hard a metal is , if we hit it with a hammer----------→

3. **Find out which is the best metal (pure or alloy) for these applications** .

- Cheap frame for a bycicle (frame = estructura bici)----------→
- Light frame for a bycicle but not expensive----------→
- Top level light frame bycicle.----------→
- Gate for a house near to the sea. (gate= cancilla, verja)----------→
- A gear for a car speed transmission box. ----------→
- A can for food ----------→
- A sliding door for a car parking (sliding = corrediza) ----------→
- A statue for a city square----------→

4. **Find out which is the best manufacturing process to obtain next objects**

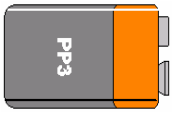
- A can for food ----------→
- A solid piece ----------→
- A door for a car ----------→
- A copper tube---------- ---------- -------→

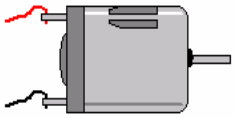
5 Una empresa de fabricación de mobiliario de oficina nos encarga diseñar un sujeta bolis de metal para una mesa de trabajo de forma que puedan ponerse en posición vertical y sin tocarse entre ellos.

Nos piden (LEE TODOS LOS APARTADOS ANTES DE EMPEZAR)

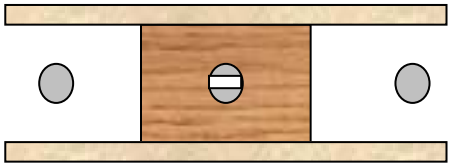
- Vistas acotadas del conjunto (tres vistas)
- Material elegido y justificando porqué lo elegimos
- Proceso industrial seguido para darle la forma final de cada una de las piezas del conjunto(numerarlas y a continuación responder)
- Hoja de proceso del montaje
- Acabado de alta calidad para mobiliario de lujo.
- Que no vuelque al colocar los cuatro bolis
- Originalidad en el diseño.

2eso Sec. Bilingüe. Electricidad





1/ Do the wiring on next elements so that you can change the motor turning direction by moving the rotary switch clock or anti-clockwise



2/ Fill next blanks with the missing words

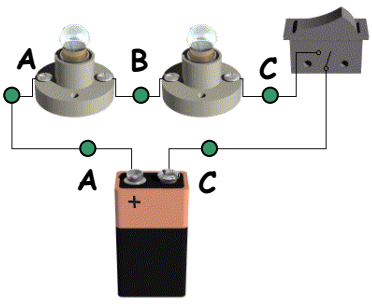
MOTOR	=		+		+	
GENERATOR	=		+		+	

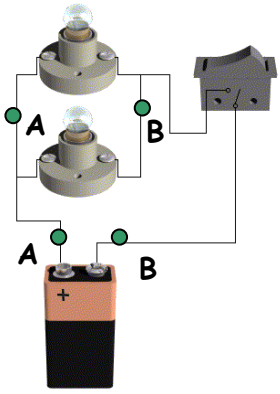
3/ Define briefly next electrical concepts , and mention in which unit is measured each one (Example kilograms, meters…..…etc)

- Intensity is ……

- Voltage is……..

4/ Analyse those two circuits to find out how many volts each bulb will support The voltage of the battery is 7V (fill the table with the answers)

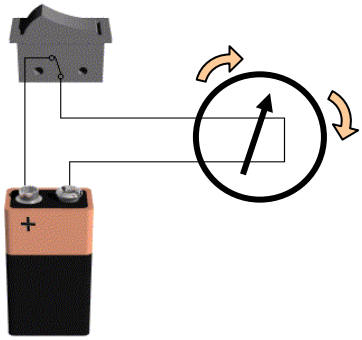


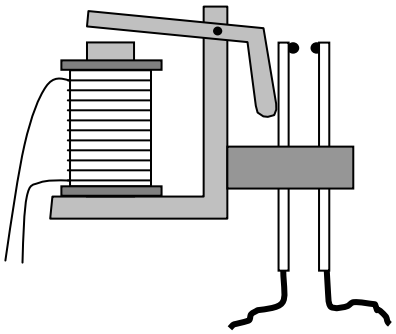


	Series circuit	Parallel circuit
Vab	V	V
Vbc	V	

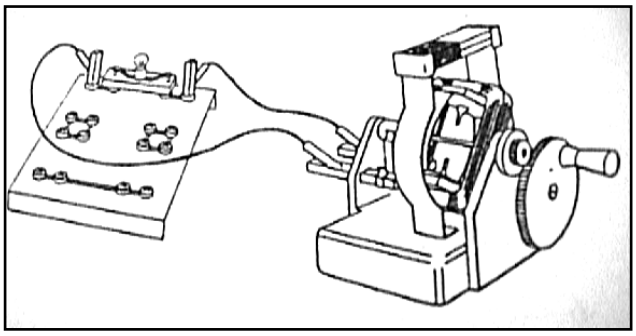
Vab**, means the voltage between point **A** and point **B

5/ Explain this experiment using the proper technical words





6/ Conecta de forma correcta este relé para que un operario/a pueda accionar el motor de una compuerta al presionar un interruptor. Material : 2 pilas, un interruptor, un motor y cables.



7/ Explain this experiment using proper technical words

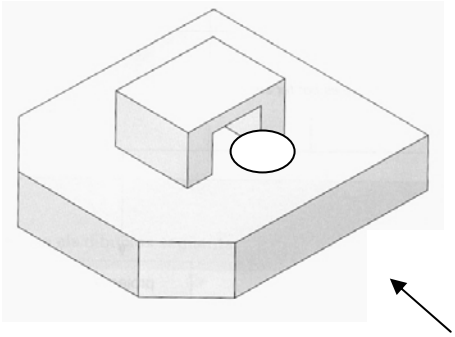
8/ Calcula cuanto tendremos que pagar en el recibo de la luz si nos lo pasan al cabo de 30 días y cada kilowatio hora (kW) cuesta 0,1 € (un kW = 1000 Watios)

Electrodoméstico	**Potencia(W)**	**Horas /día**			
Lavadora	*2000 w*	*1hora*			
6 bombillas	*60 w*	*3 horas*			
TV	*140 w*	*3 horas*			
Otros	*200 w*	*3 horas*			

9/ Listening Magnetism: ***The pull of the earth*** *. Say if theses statements are True or false. If they are false, correct the words that are wrong..*

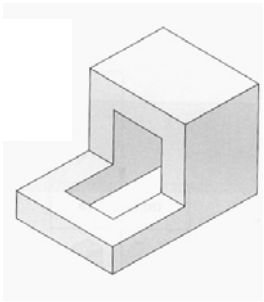
- Part of the earth is magnetic
- A magnetic compass needle will not always point in the same direction

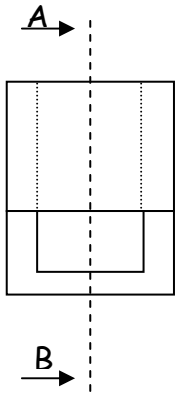
2eso. Sec Bilingüe. Vistas y perspectivas



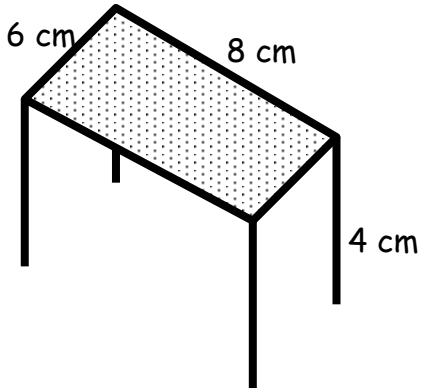
Draw the views of next object (the arrow is pointing at the front view)

Draw the cutting AB

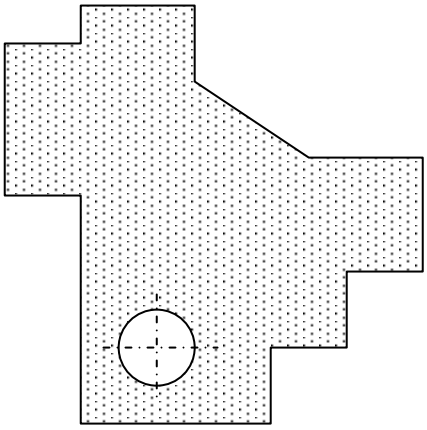




Draw This chair in Cavalier perspective .
Perspective Reduction : 1 / 2 (only in X axis)



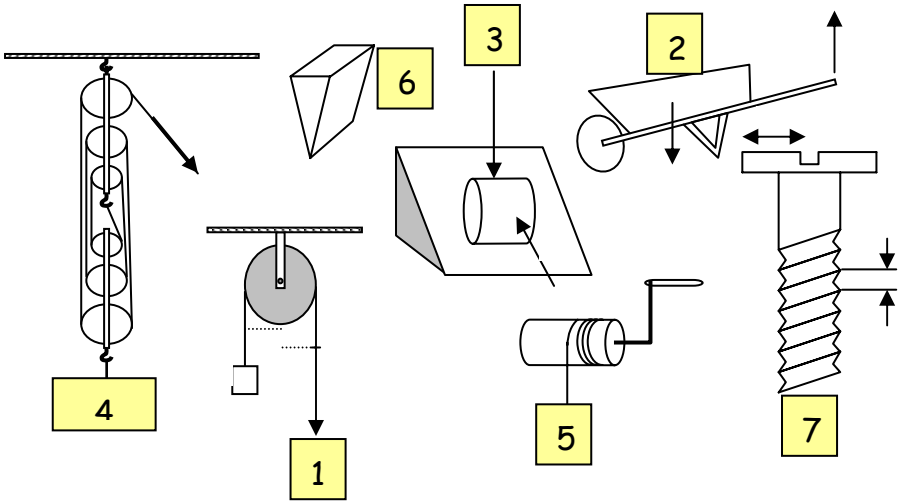
Take and Write all dimensions of this part.



2eso. Sec Bilingües. Máquinas y Mecanismos

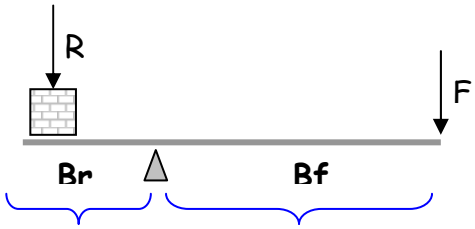
1 Write the English name of these simple machines

1.	2.
3.	4.
5.	6.
7.	



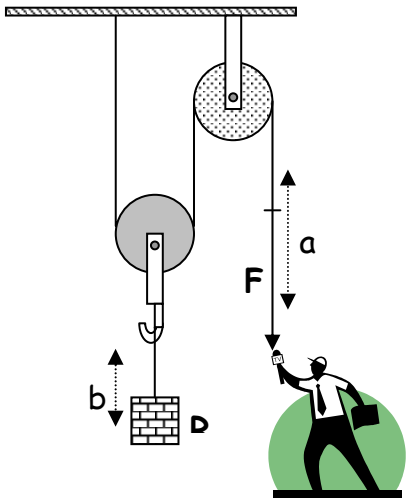
2 Write if it is True (T) or False (F)
(lever dimensions Bf = 4m and Br = 1m)

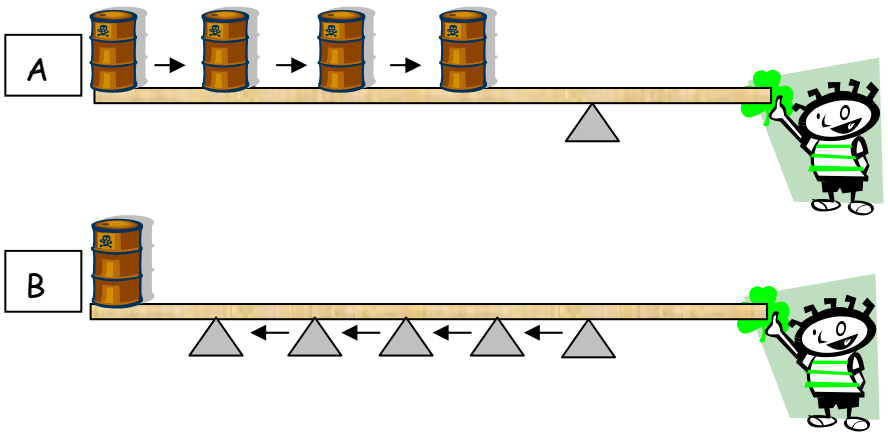
- If F= 1kg then R = ¼ kg
- If F= 1kg then R=1kg
- If F= 1kg then R= 4kg
- If F= 4kg then R = 1 kg



3 Write if it is True (T) or False (F)

- If F= 1kg R = ½ kg
- If F = 1kg R = 2 kg
- If F = 2kg R = 1kg
- If F = 1kg R = 3 kg

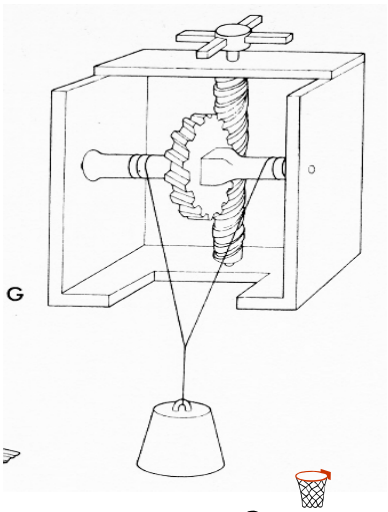




4 Write if it is True (T) or False (F)

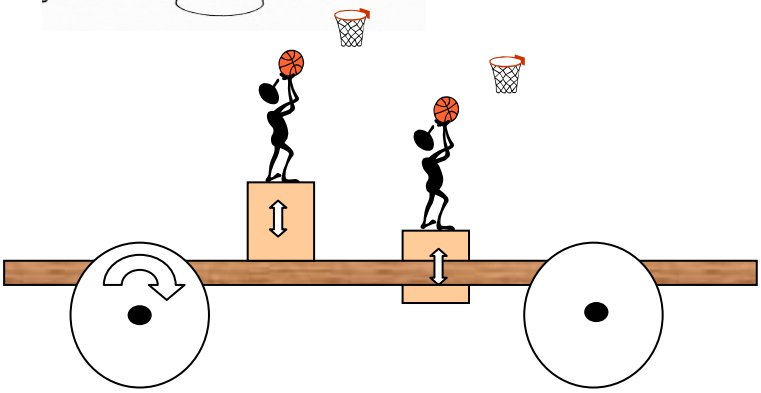
- In lever A, if the load moves to the right, the boy will do more effort
- In lever B if the fulcrum moves to the left, the boy will do more effort

- The two answers are False



5 E
mac

FORMULES F.a = R.b	R= 2. n . F	W = F.d	P =



6 A partir de un móvil sobre cuatro ruedas, diseña un mecanismo que consiga que las figuras se muevan arriba y abajo en distintos tiempos. Dibuja las vistas que precises para **que quede claro como se mueven las figuras**.

7 Diseña un mecanismo que permita que tres figuras de un escenario se muevan dando vueltas sobre si mismas. En tu proyecto **sólo puede haber una entrada de movimiento.** Dibuja las vistas que precises para **que quede claro como se mueven las figuras.**