MATHS INTERACTIVE GROUPS
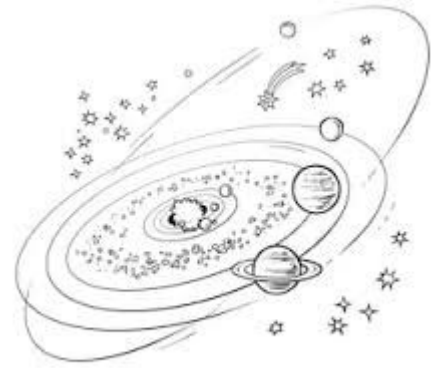### 24/01/2020

ACTIVITY 1   GROUP

Knowing that :
- The <u>light travels</u> at $3 \cdot 10^8$ m/s
- A <u>light year</u> is the distance that the light travels in a year.
- The distance from the sun to Pluto is of $5,914 \cdot 10^9$ km
- The Alpha-Centaur star is at 4,3 light years from the earth

CALCULATE: (All the answers must have 3 significant digits)

1. The distance that the light covers in a year

2. ¿How long does it take to the light to reach Pluto?

3. Express the distance between the earth and Alpha Centaur in kilometres

VOCABULARY
light: luz / to cover: recorrer / how long: cuanto tiempo / to reach: alcanzar

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ACTIVITY 2   GROUP

A factory makes 480 hubcaps per day working with five machines in two shifts (of 8 hours each).

QUESTIONS:

1. How many hubcaps will the factory make, if there is one machine more working and the hours per shift are increased to 10.

Machines	Total hours of work	Hubcaps

2. How many hours should each shift last to make 540 pieces per day with six machines working?

Machines	Hubcaps	Total hours of work

VOCABULARY
hubcap: tapacubos / shift: turno de trabajo /

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ACTIVITY 3   GROUP

3.1.-Three brothers share an inheritance of 2.820 € in a way that per each five euros that the oldest gets, the middle one gets four, and the smallest one three. How much money does each brother get?

3.2.-In a winery 7 hl of high quality wine (which price is 450 €/hl) are mixed with 11 hl of lower quality wine (which price is 280 €/hl). Which will be the price of the resulting wine? (Make an aproximation to the tenths and express the error made)

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VOCABULARY
inheritance: herencia / winery: bodega

<u>ACTIVITY 4</u>   **GROUP** [ ]

 A bus leave from **<u>A</u>** at a speed of 105 km/h. Half an hour later, a car leaves **<u>B</u>** at a speed of 120 km/h. The distance between A and B is of 300 km. Find out the distance that each one travels before they meet.

A   B

a) The car's made ....km

b) The bus's made ....km

VOCABULARY
to leave: salir / to find out: averiguar

ACTIVITY 5   GROUP [ ]

4.1.-The Rules reservoir had at the end of august a 20% less of water than in july. And at the end of july, a 15% less than in june. Which is the percentage of decrease after the two months?

4.2.- Knowing that at the begining of june, it had 105 hm^3, how many hm^3 did it contain at the end of august?

4.3.- How much money shall we get if we deposit 80.000 € at a 3,6% anual interest for two and a half years, with a monthly capitalization?