

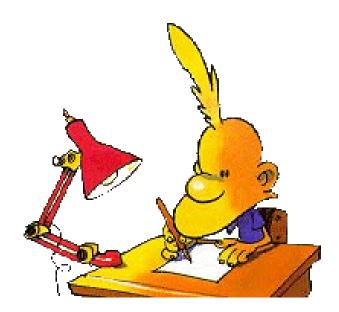
Lioret mathématiques d'énigmes In this riddle boaklet, you will find all the riddles of the 6th C.L.I.L class of the year 2023/2024 6º1 C.L.T.L: Aya, Tim, Nathan, Nada, Lisa, Lény, Emy, Zores, Mélanie, Agmoric, Nino, Flavie, Tom, Baptiste, Teken, Zena, Emmy, Yanis, Zouis, Antoine, Yarmine, Zou, Jade, Robin, Clément, Romy, Ornella, Bilal.

ARE YOU GOOD AT MATHS?

ARE YOU GOOD AT ENGLISH ?

THE PUPILS FROM THE 6^{ème} 1 CLIL CLASS HAVE THE PLEASURE TO SHARE WITH YOU THE MATHS RIDDLES THEY CREATED DURING THE MATHS AND ENGLISH CLIL CLASS IN 2023 / 2024

TRY TO SOLVE THEM AND GOOD LUCK !!

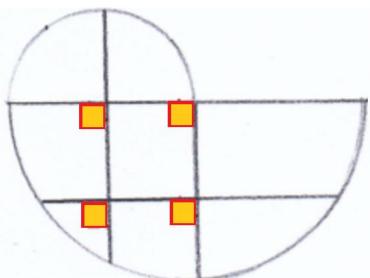


BARBAGALLO Lisa : 6^{ème} 1 ARNAUD Tim : 6^{ème} 1

EASY :

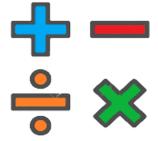
How many right angles can we

code in this figure ?



MEDIUM :

We double a number and we substract 4 then we multiply by 3 and we add 9. The result is 75. What is the starting number ?



HARD :

Around the world in 80 days is a famous work by Jules Verne.

Horse-drawn cart : 518 400 seconds Hot-air balloon : ? **Boat**: 61 920 minutes **Train**: 29 days



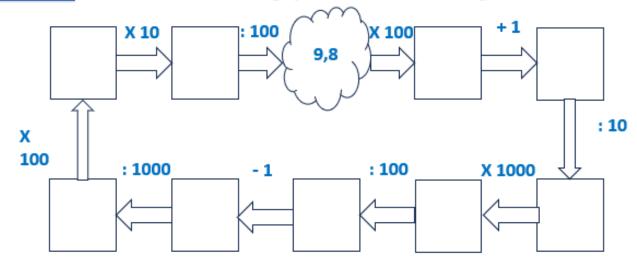




Knowing that this person travels 80 days How many days will the hot-air balloon travel?

Metivier Louis 6^{ème} 1 Crouzet Loris 6^{ème} 1

***EASY** Fill in all the empty boxes in this diagram



**MEDIUM

There are 613 pupils and 25 classrooms in Marcel Chamontin Secondary School . We know that today 38 people are missing . So , if today we divide all the people in all the classrooms how many pupils will there be in each classroom ?



***HARD

Calculate the total length of the green and red segments of this drawing knowing that to measure the length of the green segment you must add 1,5 cm and for the red segment you must multiply by 2,5 to the shortest segment .

PARIS PEREIRA Lou 6^{ème} 1 AHSEN Aya 6^{ème} 1

EASY: 🖈

In a restaurant, there is a terrace. Inside the restaurant there are 20 people and on the terrace there are 10 people, 2 waiters serve on the terrace



and 3 waiters serve inside the restaurant . 4 people come out of the terrace and go inside the restaurant (because it is cold) . How many people are there inside and outside ?

MEDIUM **

Draw the symmetric image of the landscape of the house and the two trees in the lake

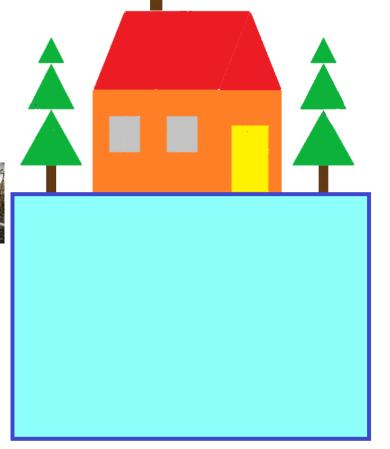




For Halloween , a family decides to make a maze . Find your way to the exit knowing that

to the exit knowing that <u>to go</u> :

- * Right you have to divide by two
- * To the top you have to multiply by two
- * Left you need to substract 1,5



* Down you have to add 0,5

1,2	3	0,1	1,8	0,9	1,4	0,7	2,5	
60	2,4	65	0,9	1,4	0,7	1,2	0,6	EXIT
32	1,8	9, 0	0,45	2,5	1	108	50	
84	0,9	2,4	8,5	10	34	6,2	24	
0,68	56	1,2	2,7	4,2	2	8,8	2024	
				ENTER				1

NOEL ANTOINE 6^{ème}1 LASSALE-BOIRON EMMY 6^{ème}1

EASY

HOW MANY TRIANGLES CAN YOU SEE IN THIS PYRAMID ? (WITHOUT COUNTING THE HIDDEN FACES)



IN A MEADOW, THERE ARE 10 COWS. THE MILK OF EACH COW GIVES 4 CHEESES. EVERY CHEESE IS CUT INTO 6 PIECES. ANOTHER FARMER BUYS 3 COWS. THE FARMER WHO HAS 7 COWS NOW WANTS TO RAISE HIS PRODUCTION TO 205 PIECES OF CHEESE EACH DAY.

WILL HE HAVE ENOUGH PIECES OF CHEESE TO REACH HIS GOAL ? AND HOW MANY COWS WILL HE HAVE



TO BUY TO RAISE HIS PRODUCTION TO 205 PIECES OF CHEESE ?



IN A HOTEL, THERE ARE 372 BEDROOMS AMONG WHICH 48 ARE SUITES .

EACH BEDROOM HAS 2 SHEETS AND 1 DUVET COVER . EACH SUITE HAS 3 SHEETS AND 1 DUVET COVER .



IF 1 SHEET COSTS 3 \$ TO BE CLEANED AND EACH DUVET COVER COSTS 5 \$ TO BE CLEANED, HOW MUCH DOES THE MANAGER OF THE HOTEL HAVE TO PAY EVERY DAY FOR THE CLEANING OF THE SHEETS AND DUVET COVERS ALTOGETHER ?

RAMOS CLEMENT 6^{ème} 1 DEPAULE AYMERIC 6^{ème} 1



Mathieu runs every morning for thirty minutes except for on days when he has school when he runs for fifteen minutes .

He goes to school on Monday, Tuesday, Thursday and Friday.

How many hours will he have run in two weeks?



AVERAGE :

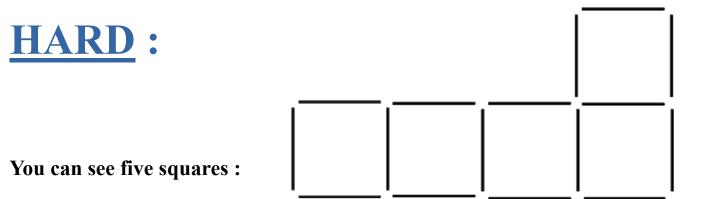
Miss Pistouille baked one hundred and seven cookies . She invited the neighbours to come for tea time .

They ate nine cookies .

The cat stole one cookie , the grand-mother baked eleven other cookies and brought them for tea . Miss Pistouille wants to share what is left into equal parts between her four children .



How many cookies will each child have . Will there be any cookies left ?



You have to move three matchsticks to get four squares.

TIKEN KAMARA 6^{ème} 1 ORNELLA SORIANO 6^{ème} 1

EASY *:

Benjamin cooks 6 chops , his dog eats

half of them and his brother eats

1 \ 3 of what's left .

How many chops are left ?

AVERAGE **:

A child plays with wooden solids on a carpet , he drops 1 pyramid ,

2 squares and 1 rectangular prism . His sister , who is passing by , has fun counting the edges .

How many edges are in total ?

DIFFICULT***:

In a college in Cambrigde , there are 657 students , $2 \setminus 3$ of the students eat at the canteen . The meal costs $3 \pounds$ for each half-boarder .

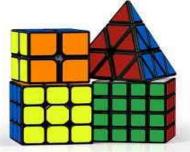
 $1 \setminus 6$ of the students who eat at the canteen also have lunch at the canteen on Wednesdays for the sport club , their meal costs $2 \ \pounds$.

On Monday ,Tuesday ,Thursday and Friday , there are 108 absents among which $1 \setminus 4$ of the students who are half-boarders .

Calculate the total amount paid be the students this week for the canteen ?





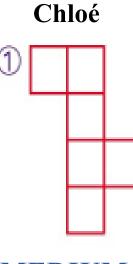


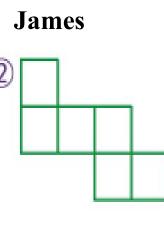
Jonathan

FICHEFEUX BRITO NINO 6^{ème} 1 DENY MAIIYA MELANIE 6^{ème} 1

EASY

Three pupils Chloé , James and Jonathan made three patterns of solids . Which pupil did not make a pattern for a cube ?







A person goes to a paint ball place . There are two possible options . The first one has 40 balls allowing you to play for 25 minutes . The second one has 21 balls every 15 min .

Which one of these two options allows



to have the maximum number of balls for the same duration?



Zushia and her family go on a trip to Hawaïï . They leave the airport of Paris at 13.50 . They arrive at Hawaïï at 12.50 (local hour) on the next day . We know that Paris is 11 hours ahead from Hawaïï .

- A) What time will the airplane (French hour) land in Hawaïi ?
- **B)** How long did the trip last ?



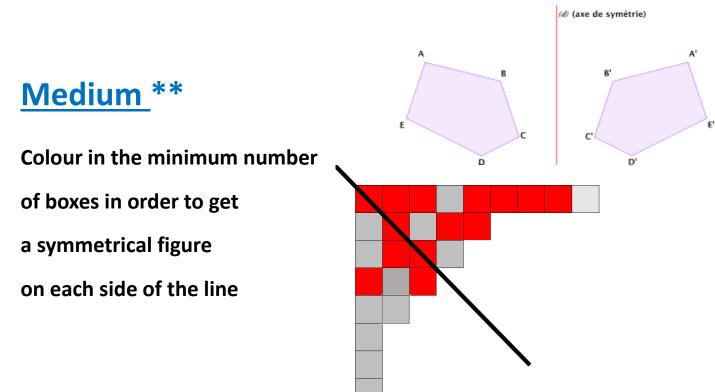
Batiste Humeau 6^{ème} 1 Jade Perbet 6^{ème} 1

Easy*

Find the hidden knowing that yo 3 to each of the

et 6 ^{eme} 1	$A \rightarrow 1$	$B \rightarrow 2$	$C \rightarrow 3$	$D \rightarrow 4$	$E \rightarrow 5$
	$F \rightarrow 6$	$G \rightarrow 7$	$H \rightarrow 8$	$I \rightarrow 9$	$J \rightarrow 10$
	$K \rightarrow 11$	$L \rightarrow 12$	$M \rightarrow 13$	$N \rightarrow 14$	$0 \rightarrow 15$
	$P \rightarrow 16$	Q→17	$R \rightarrow 18$	$S \rightarrow 19$	$T \rightarrow 20$
n message	$U \rightarrow 21$	$V \rightarrow 22$	$W \rightarrow 23$	$X \rightarrow 24$	$Y \rightarrow 25$
ou must substact	$Z \rightarrow 26$				
e following number	rs :	<u>.</u>			

13/24/15/12/24/22 6/4/8/22/4/21



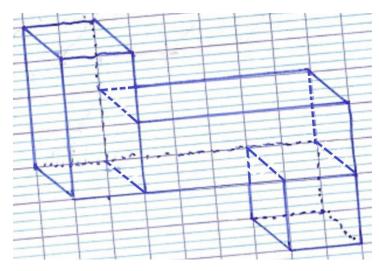
Hard ***

We consider the following figure

W How many vertex are there ?

W How many faces are there ?

It could be necessary to take into account the hidden parts





COUSIN EMY 6^{ème} 1 ROBIN PHILIPPE 6^{ème} 1



You are playing fortnite and you are level 43 (1 level equals 80 000 EXP)

At the end of your game your are level 46 Have many EXP did you win in your game ?



MEDIUM : **

In a farm there are 85 cows.

In January two lorries full of cows came . (in the lorry there are 26 cows) .

11 cows were sold to another farmer . The farmer wants to have the same number

of cows in each of his two fields .

HARD: ***

How many cows will there be in each field ?



		QUANTITY	UNIT PRICE	TOTAL
	САР	84	•••••	756 €
	SHOES	•••••	48 €	288 €
3	SHIRT	21	•••••	273 €
	TRACKSUIT	•••••	35€	•••••
	PAIRS OF SOCKS	•••••	4€	72 €
			TOTAL	1 634 €

Fill in the grid above



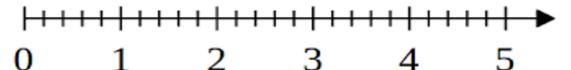


A woman goes to the supermarket . She buys 2 big apples which cost 1 \$ each , 3 bottles of fruit juice which cost 3 \$ each , 5 pens which cost 2 \$ each .



Will she have enough money if she pays with a 20 \$ note ?





- 1) Put the letter E at 2,6
- 2) Put the letter T at 4,8
- 3) Put the letter R at 1,7
- 4) Put the letter A at 3,5
- Q1 : Which letter is missing to find a famous english word ?
- Q2 : Put the missing letter on the graduation , knowing that it is the sixth of the sum of 4 and 2 .



You must use only once each of the following figures :

5 , 9 , 3 , 8 and only once each of the 4 following operations : + , – , \times , \div

Write the calculations to get 7.



NADA BAADI 6^{ème} 1 LENY BUE 6^{ème} 1

Easy:

Complete this operation : 789 X 36 4 - 4+ 2 - 6 - 0 = 2 _ _ 0 4 Medium :

Bilal buys 9 goldfish . He puts them into an aquarium but 3 died of old age, a cat ate 2 of them and 1 jumped out the aquarium . Bilal decides to buy the double number of the dead fish . How many goldfish will there be in the aquarium?

Hard: \mathbf{H}

For his birthday, Tom buys 2 bags of dragibus each containing 25 dragibus , 3 little bags of crocodiles each containing 7 crocodiles and 1 big bag of 24 schtroumpfs. Knowing that, Tom invites 6 friends : each friend eats the same quantity of sweets and Tom gives the smallest number of sweets to his

little sister Anna .

How many sweets will the 6 friends have each and how many sweets will Anna have **?**



Gottschalk Tom 6^{ème} 1 Kentaoui Lena 6^{ème} 1

EASY Bob bought three packets of candy . In each packet there are 15 candies . But Bob is greedy so he eats 3 candies from the first packet . Then the double from the second packet and the triple from the 3rd packet .

How many candies are there left in each packet ?

MEDIUM

On a beach there are 64 people . The quarter of these people have 2 sunshades each , and the others have only one sunshade .

How many sunshades are there on the beach ?

HARD

We choose a whole number After we add 3 to the result After we divide the result by a whole number We subtract 4 to the result After we multiply the result by a whole number to finish we add 2

Knowing that the starting number and the final number is 7 Find the missing numbers in this sequence of calculation ?







ROMY RIBET 6^{ème} 1 BILAL SOUSSI 6^{ème} 1



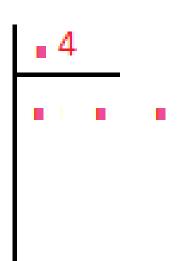
A runner runs for one hour . In 30 minutes he runs 6 kilometers . How long does it take him to run 200 meters knowing that he runs at the same speed all the time ?



Manon has 5 pens more than Lucy . Lucy has twice as many pens as Anna . Mia has 3 pens less than Manon and she has 6 pens . How many pens does each child have ?



Fill in the dots so that the division is right.





AYME NATHAN 6^{ème} 1 OU-AANKOUR YASMINE 6^{ème} 1

EASY:

My brother comes home with 4 identical chocolate bars .

While we talk I eat 1 half of one bar

and he eats another bar

(1 bar measures 6 cm)

If we join all the remaining bars, how long will it be?

MEDIUM :

Lena wants to make her dining room bigger . Knowing that she gets paid 2 500 £ per month and she has to use 5 451 £ from her bank account and she needs another 10 549 £ to finance the whole construction

1) How much does the construction cost ?

2) How many months does she have to work for ?

HARD :

In a store 7 identical bottles of shampoo cost 21 \pounds and 5 shower gel cost 10 \pounds .

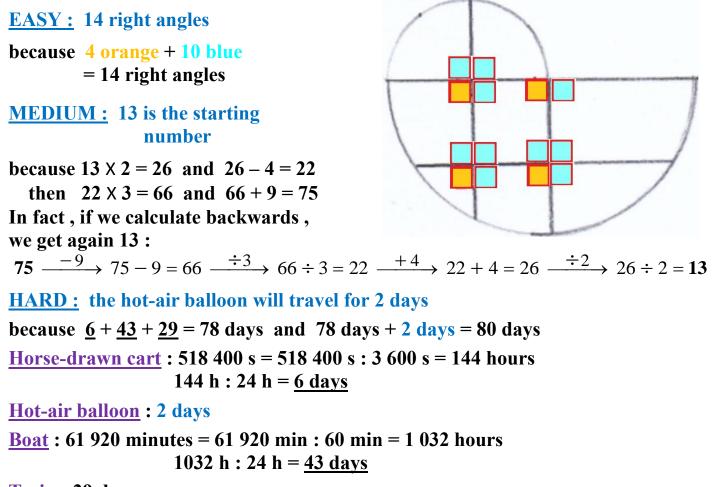
Knowing that one of the customers has a VIP pass which allows him to get 25 % off any products .

How much will he have to spend if he buys 3 shower gel and 4 bottles of shampoo ?









<u>Train</u> : <u>29 days</u>

ANSWER KEY RIDDLE n° 2

EASY:		98 × 10	980	× 100 + 1 980 - 980 - 9	81
<u>MEDIUM</u> : Ther in eac because $613 - 38 =$ and $575 : 25 = 23$	h classroom 10 = 575		-1 980 -1 980	: 100 X 1000 X 31 98100 9	: 10 8,1
HARD :	in Green	in R	ed		
small segment	4	1	.6		
Average segment	5,5 (4+1,	5) 4	(1,6 X 2,	5)	
Large segment	7 (5,5+1	1,5) 10	(4 X 2,5)	
Total : $4 + 5, 5 + 7 =$	= 16,5 cm and 1	,6+4+10=	= 15,6 cm		

Total length : 16,5 + 15,6 = 32,1 cm

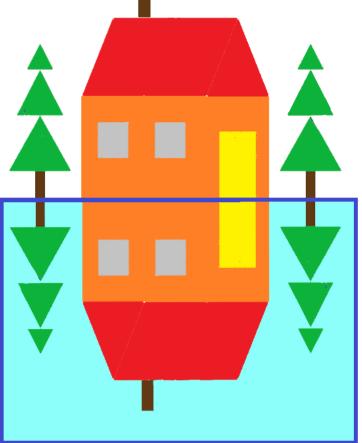
EASY:

<u>Outside</u>: There are 10 people on the terrace and 2 people serve on the terrace, so 10 + 2 = 12 people are on the terrace But 4 people went into the restaurant (it is cold) so 12 - 4 = 8 people are on the terrace !

<u>Inside</u> : Since there are 20 people inside the restaurant and since 3 people serve inside the restaurant , 20 + 3 = 23people are inside the restaurant . But 4 people went into the restaurant (cold) so 23 + 4 = 27 people are inside the restaurant !

MEDIUM:

The answer is to draw the symmetric image of of the house and the two trees in the lake



H	A	RI	D	:

1,2	3	0,1	<mark>1,8</mark>	<mark>0,9</mark>	<mark>1,4</mark>	0,7	2,5	
60	2,4	65	<mark>0,9</mark>	<mark>1,4</mark>	0,7	1,2	<mark>0,6</mark>	DXI/
32	<mark>1,8</mark>	<mark>9, 0</mark>	0,45	2,5	1	108	50	
84	<mark>9, 0</mark>	<mark>2,4</mark>	8,5	10	34	6,2	24	
0,68	56	1,2	2,7	<mark>4,2</mark>	2	8,8	2024	-
				ÐNINÐR				

EASY: 20 TRIANGLES : 9 on the left face and 11 on the right face (without counting the hidden faces)

MEDIUM : He must buy 2 cows to raise his production Each cow gives $4 \ge 6 = 24$ pieces of cheese. The farmer who has 7 cows makes $7 \ge 24 = 168$ pieces of cheese. But it is not enough because he wants 205 pieces of cheese. He needs 205 - 168 = 37 pieces of cheese therefore he must buy 2 cows to raise his production and he will have $168 + 2 \times 24 = 168 + 48 = 216$ pieces of cheese **HARD**: Total cleaning cost paid by the hotel per day is 4 236 \$ Number of non suites : 372 - 48 = 324 non suite Number of sheets and duvet covers for the non suites : 324 X 2 sheets = 648 sheets / 324 X 1 duvet = 324 duvet covers Number of sheets and duvet covers for the 48 suites : 48 X 3 sheets = 144 sheets / 48 X 1 duvet = 48 duvet covers Total number of sheets and duvet covers in this hotel : 648 + 144 = 792 sheets / 324 + 48 = 372 duvet covers total amount paid for the sheets (cost 3 §): 792 X 3 = 2 376 total amount paid for the duvet covers (cost 5 \$): $372 \times 5 = 1860$ Total cost : $2\,376\,\$ + 1\,860\,\$ = 4\,236\,\$$

ANSWER KEY RIDDLE n° 5

EASY : You must calculate how many times he runs a day when he does not go to school : 3 (days) X 30 (min) = 90 min
You must calculate how many times he runs on the days when has school :
4 (days) X 15 (min) = 60 min . For one week : 90 min + 60 min =150 minutes
The result for two weeks : 150 min X 2 weeks = 300 minutes
= 5 X 60 min = 5 hours

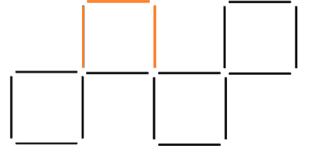
MEDIUM :

You must calculate the total number of cookies : 107 - 9 - 1 + 11 = 98 - 1 + 11 = 97 + 11 = 108 cookies The part of each of the four children :

108 : 4 = 27 cookies each and there are no cookies left







EASY*: There remains 2 chops because the dog eats 6 : 2 = 3 chops There remains 6 - 3 = 3 chops. His brother eats 1/3 of 3 chops so 3:3=1 chop. Finally there remains 6 - (3 + 1) = 6 - 4 = 2 chops **AVERAGE****: There are 44 edges 1 pyramid has 4 + 4 = 8 edges 1 square has 4 + 4 + 4 = 4 X 3 = 12 edges So 2 squares have $2 \ge 12 = 24$ edges 1 rectangular prism has 4 X 3 = 12 edges In total there are 8 + 24 + 12 = 32 + 12 = 44 edges **DIFFICULT***** : Total amount paid by the students this week is 1 379 £ Number of half-boarders : 657 : 3 = 219 and $219 \times 2 = 438$ Number of half-boarders eating on Wednesdays : 438 : 6 = 73

Number of half-boarders absent : 108: 4 = 27

total amount (meal costs 2 £ on Wednesdays): 73 X 2 £ = 146 £ total amount (meal costs 3 \pounds) : (438 - 27) X 3 = 411 X 3 = 1 233 \pounds Total amount : $146 \pm 1233 \pm 1379 \pm$

ANSWER KEY RIDDLE n° 7

EASY:	The wrong pattern is Jonathan's (3)
	Because if we fol dit it's not a cube

- **MEDIUM**: The best option is the 1st one, if we take 5 minutes for the first one we have 8 balls and for the 2nd one we have 7 balls
- The first one : 40 balls to play 25 minutes dividing by 5 we get :

40:5 = 8 balls to play 25:5 = 5 minutes

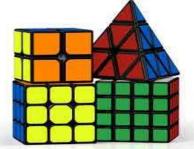
The 2nd one : 21 balls to play 15 minutes dividing by 3 we get :

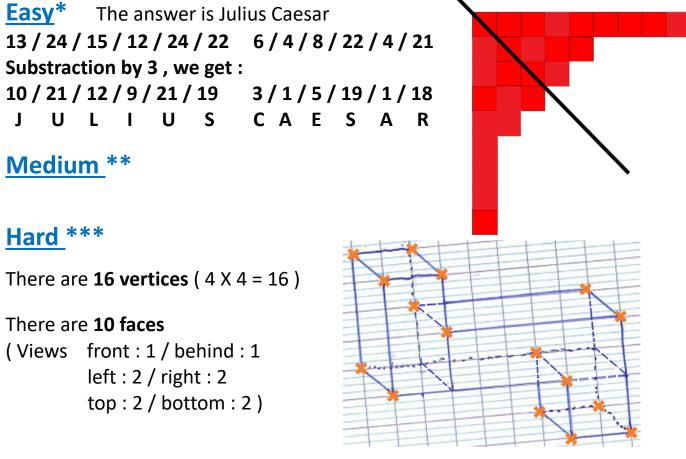
21: 3 = 7 balls to play 15: 3 = 5 minutes

HARD : A) At 23.50 pm on the next day because 12:50 + 11:00 = 23:50

B) It lasts 34 hours because between 13:50 (French hour) and 24:00 pm there are 10 h 10 because 24 h - 13 h 50 = 11 h - 0h 50 = 10 h 10. As the plane lands on the next day at 23:50 pm (French hour) we need to calculate :

10 h 10 + 23 h 50 = 33 h 60 = 33h + 1 h = 34 hours





ANSWER KEY RIDDLE n° 9

Easy: At the end of your game you win 46 – 43 = 3 levels So you won in your game : 3 X 80 000 = <u>240 000 EXP</u>

Medium: two lorries full of 26 cows : $2 \times 26 = 52$ cows total number of cows : 85 + 52 - 11 = 137 - 11 = 126 = cowsTotal number of cows in each of the two fields : $126 : 2 = \underline{63 \text{ cows}}$

Hard :

		QUANTITY	UNIT PRICE	TOTAL
	САР	84	9€	756 €
	SHOES	6	48 €	288 €
	SHIRT	21	13€	273 €
ØŖ	TRACKSUIT	7	35 €	245 €
	PAIRS OF SOCKS	18	4€	72 €
			TOTAL	1 634 €

 $\underline{\mathbf{EASY}}: \bigstar$

No, she needs another dollar because

R1 : It's the letter G and the famous word is GREAT .				
R2:4+2=6 and $6:6=1$	Put the letter G at 1			

HARD:
$$\times$$
 \times \times \times
5 X 9 = 45 and 45 ÷ 3 = 15 then 15 – 8 = 7

ANSWER KEY RIDDLE nº 11 789

X

36

2,6

Easy :

Medium : There will be 13 goldfish in the aquarium		4734
Total Number of fish still in the aquarium :		2367 0
9 - 3 - 2 - 1 = 6 - 2 - 1 = 4 - 1 = 3 goldfish		
As 3 goldfish died of old age and a cat ate 2 we know that	=	28404
3 + 2 = 5 dead goldfish so bilal buys the double : 5 fish X $2 = 10$		
New total Number of fish in the aquarium : $\underline{3} + \underline{10} = 13$ goldfish		

<u>Hard</u>: The 6 friends will have <u>15</u> sweets each and the little sister Anna will have 5 sweets

Total Number of dragibus : 25 dragibus X 2 = 50 dragibus Total Number of crocodiles : 7 crocodiles X 3 = 21 crocodiles Total Number of schtroumpfs : 24 schtr X 1 = 24 schtroumpfs Total Number of sweets : 50 + 21 + 24 = 71 + 24 = 95 sweets The division of 95 by 6 gives the quotient : 15 and the remains is 5

EASY: $1^{\text{st}} \text{ packet}: 15 - 3 = 12 \text{ candies}$ $2^{\text{nd}} \text{ packet}: 2 \text{ X} 3 = 6 \text{ and } 15 - 6 = 9 \text{ candies}$ $3^{\text{rd}} \text{ packet}: 3 \text{ X} 3 = 9 \text{ and } 15 - 9 = 6 \text{ candies}$

MEDIUM : There are 80 beach sunshades

On a beach there are 64 people .

The quarter of 64 people is : 64 / 4 = 16 people who have 2 sunshades each it means that we have $16 \times 2 = 32$ sunshades

It remains 48 people (64 - 16 = 48) who have only one sunshade so we have <u>48</u> sunshades .

Finally we have $\underline{32} + \underline{48} = 80$ sunshades.

HARD: 7+3=10 divided by 2 equals 10:2=55-4=1 multiplied by 5 equals $1 \ge 5$ 5+2=7!

ANSWER KEY RIDDLE nº 13

EASY : 1 minute

In 30 minutes he runs 6 kilometers so in 5 minutes he runs 1 kilometer it means that in 5 minutes he runs 1 000 meters

so in 1 minute he runs 200 meters

MEDIUM : Mia has 6 pens Manon has 9 pens

because Mia has 3 pens less than Manon (6 = 9 - 3)

Lucy has 4 pens

because Manon has 5 pens more than Lucy (9 = 4 + 5)

Anna has 2 pens because Lucy has twice as many

pens as Anna ($4 = 2 \times 2$)

TTADD	
$H \land P \cap$	٠
IIAND	

$$\begin{array}{c}
2689 \\
- \underline{14} \\
128 \\
126 \\
29 \\
28 \\
1
\end{array}$$

EASY :

Number of remaining bars : 4 - 0,5 - 1 = 3,5 - 1 = 2,5 bars Length of the remaining bars : 2,5 X 6 cm = **15 centimeters**

MEDIUM :

- 1) 10 549 \pounds + 5 451 \pounds = 16 000 \pounds
- 2) $16\ 000\$: $2\ 500\$ = 6,4 months so 7 months

HARD :

5 shower gel cost 10 £ so and 1 shower gel costs 10 : $5 = 2 \pounds$. As 1 shower gel costs 2 £ so 3 shower gel cost 3 X 2 £ = <u>6 £</u>

7 identical bottles of shampoo cost 21 £ so 1 bottle of shampoo costs 21 : 7 = 3 £ so 4 bottle of shampoo cost 4 X 3 £ = 12 £

whitout any reduction the price would have been $\underline{6 \pounds} + \underline{12 \pounds} = 18 \pounds$ with the VIP pass we pay 25 % less than the initial price that means a reduction of : 18 \pounds : 4 = 4,5 £

The final price is : $18 \pm -4,5 \pm = 13,5 \pm$

