



VISIT MATH



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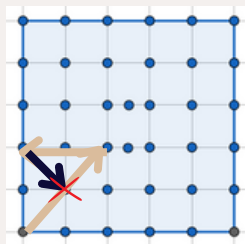
Answers

Step 1 : The heart of the bastide

Answer => "Blé" geometric representation:

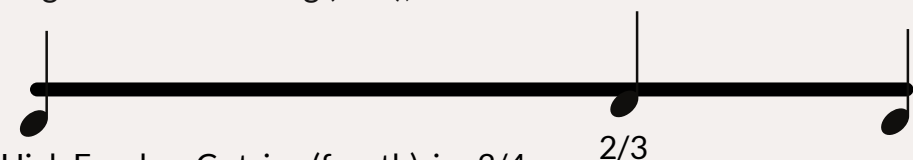
Calculation of coordinates:

$$\vec{A} + \vec{B} + \vec{C} = (2-2+1; 2+0-1) = (1;1)$$



Answer 2 =>

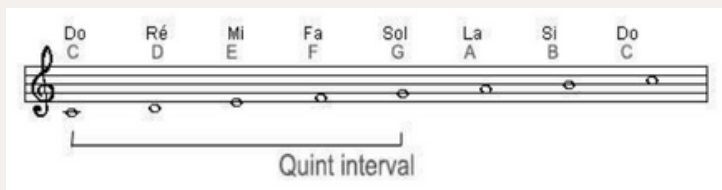
High G on low C string (fifth), i.e. $\frac{2}{3}$



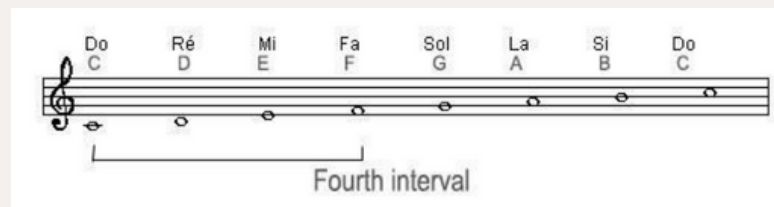
High F on low C string (fourth), i.e. $\frac{3}{4}$



If we position the bridge at $\frac{1}{3}$ of the string and if we sound at $\frac{2}{3}$ of the string corresponds to the sound of the G note. The interval from C to G is called a straight. The fifth of C is G.



The interval between the C and the F is called a fourth. Pitch $\frac{1}{4}$.



Step 2 : At Jean I of Armagnac

Answer => There are 18 large numbers, 10 in Roman writing "X"

The key is 18. Therefore, the letter "A" corresponds to the letter "S" on the Caesar code.

The code word WAYZL, when decoded, gives EIGHT.

Step 3 : Horse help

Answer => Traction speed = 3km/h, 3km = 3000 m.

1h = 3600 seconds.

So in m/s = $3000/3600 = 0.83$. So the traction speed is 0.83 m/s.

To lift 1 bag to a height of 4m = $4/0.83 = 4.8$ s

So for 10 bags, the time is $4.8 \times 10 = 48$ seconds.

Now add the time taken to unhook, back the horse and anchor the other bag, i.e. 6 seconds per bag. For 10 bags, this action must be performed 9 times. So $6 \times 9 = 54$ seconds for 10 bags.

The total time taken to lift 10 bags to the attic is therefore $48s + 54s = 102$ seconds.

Now we just need to convert these 102 seconds into minutes.

1 min = 60seconds

so $102/60 = 1.7$ minutes

this means 1 min + 70% of 1 min.

If 60s represents 100% of 1 min then 70% of 1min or 70% of 60s is $(70 \times 60)/100 = 42$ seconds.

The final result is therefore 1min 42 seconds to assemble 10 bags in the attic.



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Step 4 : The Chapel

Answer => The actual total surface area to be renovated is 295.06 m^2

Total surface area of the building (316.80 m^2) - 3 large arched windows (9.93 m^2) - 2 medium windows on the first floor (3.46 m^2) - the average window on the 2nd floor (1.67 m^2) - 4 small windows at the very top (3.12 m^2) - 4 ventilation squares (1.96 m^2) - 1 ventilation rectangle (1.30 m^2) - wrought iron rectangle (0.30 m^2).

Step 5 : The lords of Argoumbat

There are several answers to this riddle.

It all depends on whether, for example, we consider that the left window $Y = 2X$ or that $Y = 4X$.

Similarly, for the right-hand window Z , we can assume that $2/3 Z = 2X$,

so $Z = 2 \times 3/2$; $Z = 6X/2$; $Z = 3X$

or $Z = 3/4 (4X)$ so $Z = 3/4 \times 4X$; $Z = 12/4$; $Z = 3X$

So in both cases $Z = 3X$

For example, if we write each equation as a function of X .

$25X + 2X + 3X = 35$ so $X = 7/6$

$Y = 2X$

$Y = 2 \times 7/6$

$Y = 14/6$

$Y = 7/3$

$Z = 3X$

$Z = 3 \times 7/6$

$Z = 21/6$

$Z = 7/2$

or

$25X + 4X + 3X = 35$

Donc $X = 35/32$

$Y = 4X$

$Y = 4 \times 35/32$

$Y = 140/32$

$Y = 35/8$

$Z = 3X$

$Z = 3 \times 35/32$

$Z = 105/32$

Step 6 : The Sirens of Beaumont

Answer => Attenuation of -80dB for 10000m or 10 km.

Additional response:

Did you know ? The sound intensity level, noted L and expressed in dB (decibels), measures the sound pressure level taking into account the sensitivity of the ear. It is expressed with a particular mathematical function, the logarithm.

$L = 10 \times \log(I / I^0)$ with $I^0 = 1 \times 10^{(-12)} \text{ W/m}^2$ => This is why this calculation chart seems so strange to us.

The formula for Fermat's theorem evokes the Pythagorean theorem.

The secret code

Answer => The code to find is 3/5/17

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