BACCALAUREAT-DNL Mathématiques/Anglais - Session 2018

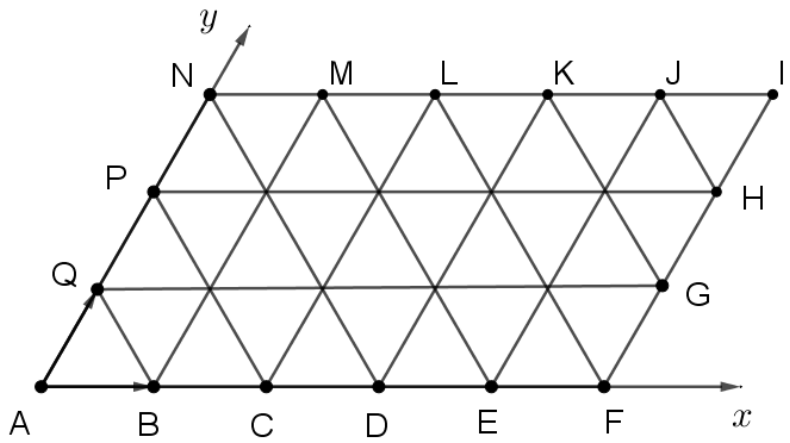
Die hard

1) Watch the video, describe what's happening.

2) This problem can be turned into geometry :

x-axis represents the volume contained in the 5 gallon jug

y-axis the volume contained in the 3 gallon jug .




Give x and y-coordinates for P, J and F. Explain these coordinates by referring to the two jugs.
Which of these three points is a solution to the problem?

3) Explain what handling (with the jugs) is represented by the following paths
   a. N to D
   b. Q to G
   c. L to C

4) Present a solution to the problem starting with filling the 5 gallon jug.
5) Is it possible to get exactly 1 gallon using these two jugs?

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1) Die hard

2)

P(0;2) : nothing in 5 gallon jug, and 2 in 3 gallon jug

J(4;3) : 4 in 5 gallon jug, and 3 gallon jug is full

F(5;0) : 5 gallon jug is full, and *Tapez une équation ici.* 3 gallon jug is empty

3)

N(0,3) to D(3,0) : pour the small jug into the big with 3 gallon

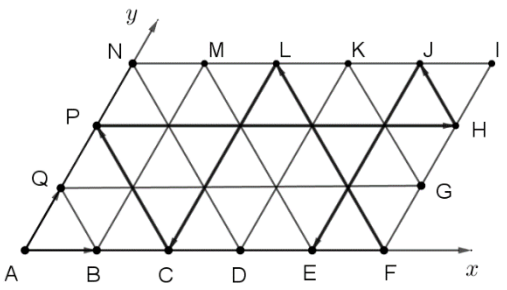
Q(0,1) to G(5,1) : fill the big jug

C(2,0) to L(2,3) : fill the small jug

4)

| | Small jug | Big jug |
|---|---|---|
| Fill the big jug | 0 | 5 |
| Poor it in the small one | 3 | 2 |
| Empty the small one | 0 | 2 |
| Poor the big into the small | 2 | 0 |
| Fill the big one | 2 | 5 |
| Pour into the small jug | 3 | 4 |

It's done with the big jug!




Path : F-L-C-P-H-J-E

5) It's possible ! If you continue the path, you go through all of the points, especially B.