**Le problème des fourmis - sous-titres :**

**The dialogue starts at 40 seconds in so I added 27 seconds to the times as they were - John Argentino**

1

00:00:00,000 --> 00:00:40,000

[Musique]

2

00:00:40,000 --> 00:00:43,000

Les énigmes que je vous

3

00:00:43,000 --> 00:00:45,000

poserai sont des versions élémentaires

4

00:00:45,000 --> 00:00:47,000

d'une énigme plus compliquée

5

00:00:47,000 --> 00:00:50,000

connus sous le nom « problème des fourmis », que je vais

6

00:00:50,000 --> 00:00:51,000

probablement discuter dans une autre

7

00:00:51,000 --> 00:00:54,000

vidéo. Permettez-moi de finir d'écrire

8

00:00:54,000 --> 00:00:58,000

le titre et, bien, je peux même dessiner une

9

00:00:58,000 --> 00:01:11,000

petite fourmi ici même. Bon, allons-y !

10

00:01:11,000 --> 00:01:15,000

allons-y ! Comme je disais avant, je vais discuter

11

00:01:15,000 --> 00:01:18,000

deux énigmes. Dans le premier,

12

00:01:18,000 --> 00:01:22,000

il y a deux fourmis sur un plateau très haut, un genre

13

00:01:22,000 --> 00:01:25,000

de montagne, plat au sommet avec deux

14

00:01:25,000 --> 00:01:28,000

falaises abruptes sur les deux côtés. Le sommet

15

00:01:28,000 --> 00:01:32,000

plat mesure 1 mètre de large. Les deux fourmis bougent

16

00:01:32,000 --> 00:01:36,000

avec une vélocité, appelons-la v, qui est

17

00:01:36,000 --> 00:01:38,000

la même pour les deux et égal à

18

00:01:38,000 --> 00:01:41,000

un centimètre par seconde. Vous

19

00:01:41,000 --> 00:01:43,000

pouvez décider la direction dans laquelle chaqu'une des

20

00:01:43,000 --> 00:01:46,000

la fourmi se déplace, soit vers la droite, soit vers la gauche,

21

00:01:46,000 --> 00:01:49,000

et où placer exactement les deux fourmis

22

00:01:49,000 --> 00:01:53,000

en haut de la montagne. Votre but est de

23

00:01:53,000 --> 00:01:55,000

make the time the last ant takes before

24

00:01:55,000 --> 00:01:58,000

falling the longest possible. Ants cannot

25

00:01:58,000 --> 00:02:01,000

be still: they must move to the right or

25

00:02:01,000 --> 00:02:04,000

to the left but they must move and after

26

00:02:04,000 --> 00:02:07,000

meeting each other they turn around and

27

00:02:07,000 --> 00:02:10,000

keep moving with the same but opposite

28

00:02:10,000 --> 00:02:12,000

velocity

29

00:02:12,000 --> 00:02:16,000

[Music]

30

00:02:16,000 --> 00:02:20,000

so again what are the precise positions

31

00:02:20,000 --> 00:02:23,000

where I should place the two ants in

32

00:02:23,000 --> 00:02:25,000

order to get the longest time before the

33

00:02:25,000 --> 00:02:37,000

last ant falls? The second puzzle is

34

00:02:37,000 --> 00:02:39,000

basically the same but now we have three

35

00:02:39,000 --> 00:02:41,000

ants instead of two.

36

00:02:41,000 --> 00:02:44,000

As before the ants velocity is one

37

00:02:44,000 --> 00:02:46,000

centimeter per second, every ant turns

38

00:02:46,000 --> 00:02:48,000

around after meeting another ant and

39

00:02:48,000 --> 00:02:52,000

the peak is one meter wide. So, what are

40

00:02:52,000 --> 00:02:55,000

now the precise positions

41

00:02:55,000 --> 00:02:58,000

I should place the three ants in order

42

00:02:58,000 --> 00:03:00,000

to get the longest time before the last

43

00:03:00,000 --> 00:03:06,000

ant falls down? I hope you enjoyed this

44

00:03:06,000 --> 00:03:09,000

video do your best and good luck