PUZZLING CARTOON

- THE FURIBARDE -

The Puzzle

In the Geometrical Forest lives the Furibarde and the Lapgourou. The Furibarde likes to chase the Lapgourou.

The Lapgourou runs in a straight line. It takes it 2 seconds to jump 4 metres, then rests for 1 second. Then, it starts jumping again. The Furibarde also runs in a straight line. It takes it 1 second to jump 3 metres, but it does not stop in between the jumps.

One morning, the Furibarde spots a Lapgourou. It is 32 metres away from the animal it decides to chase. The Furibarde can only catch the Lapgourou when it is stopped.

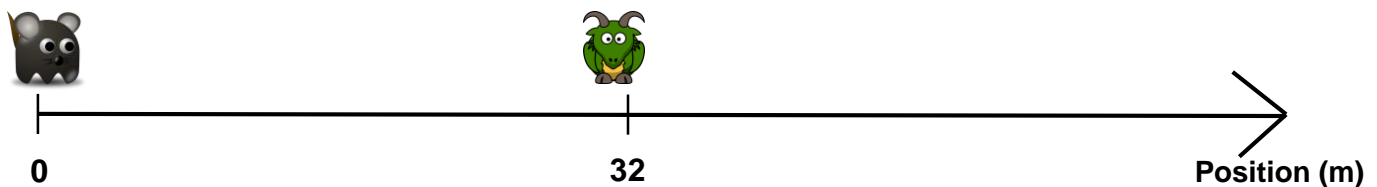How many seconds will it take for the Furibarde to catch the Lapgourou?

The answer:

It will take exactly 20 seconds for the Furibarde to catch the Lapgourou.

The solution:

To solve this problem, it may be interesting to draw tables representing the two creatures' positions according to time. By doing this, we can see at what time the two creatures have the same position (a point in common for the two creatures). Since we know the two animals run in a straight line, we can take as the starting point (0 metre) the place where the Furibarde sees the Lapgourou (that is then 32 metres away).

This way, at the initial time (at 0 seconds), we will have:

We know the Furibarde moves 3 metres per second. Also, the Lapgourou moves 4 metres in two seconds, rests one second and moves again.
With this information, we have everything we need to create the tables:

Furibarde

Time (s)	Position (m)
0	0
1	3
2	6
3	9
4	12
5	15
6	18
7	21
8	24
9	27
10	30
11	33
12	36
13	39
14	42
15	45
16	48
17	51
18	54
19	57
20	60
21	63
22	66
23	69
24	72

Lapgouru

Time (s)	Position (m)
0	32
2	36
3	36
5	40
6	40
8	44
9	44
11	48
12	48
14	52
15	52
17	56
18	56
20	60
21	60
23	64
24	64
26	68
27	68

We see that the Furibarde will catch the Lapgourou 20 seconds after seeing it and 60 metres farther!