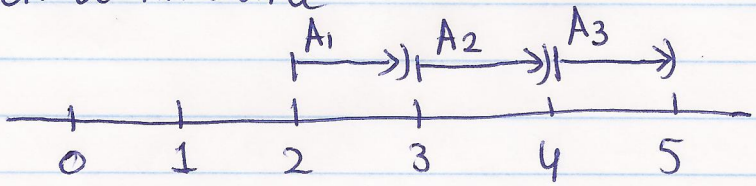
g. An example:

$$A_n = n + [1,2) \quad \text{for } n = 1,2,\ldots$$

for example $A_1 = 1 + [1,2) \Rightarrow [2,3)$

on a timeline



The intersections are empty, in other words

$$\bigcap_{n=1}^{\infty} A_n = \emptyset$$

Proof: All A_n intervals are closed on the left and open on the right, they are never overlapping. See timeline.

So $\bigcap_{n=1}^{\infty} A_n = \emptyset$. □