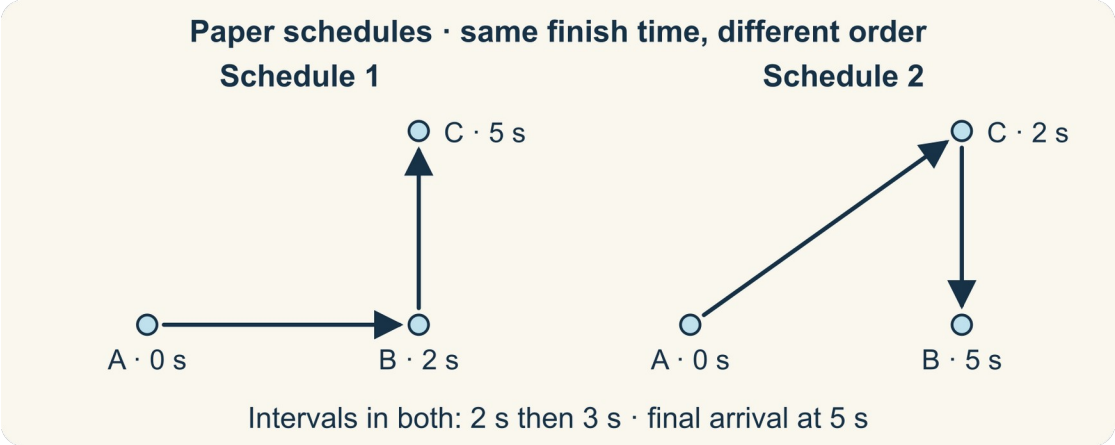
Explain a movement sequence on paper

What order and timing information would a diagram need?

Represent order and timing with a paper token, then find which information a sequence diagram must supply.

Explore | 15–25 minutes, or one comparison | Paper and pen, or three labelled cards, No sport equipment, timing device or physical movement needed

Start here Mark A (0, 0), B (2, 0) and C (2, 2) on paper. These are invented board positions in grid units, not places you need to move to.



Same clock times, different positions

1 Read schedule 1

At time 0 the token is at A. It reaches B at 2 seconds and C at 5 seconds. Draw arrows A→B→C and label each arrival time.

2 Find the intervals

The first interval is 2−0 = 2 seconds; the second is 5−2 = 3 seconds. Arrival time 5 is not a five-second second interval.

3 Compare another order

Schedule 2 reaches C at 2 seconds and B at 5 seconds: A→C→B. Total time is still 5 seconds, but the intermediate position and final position differ.

4 Complete the instructions

Label the start, order, positions, time unit and what each time means. A dot at an arrival time does not tell you the exact movement or speed between dots.

Equal total time different sequence

Both schedules are fictional paper records, not exercise targets or measured performance.

• Schedule 1: A at 0 s, B at 2 s, C at 5 s. Its intervals are 2 s then 3 s.

• Schedule 2: A at 0 s, C at 2 s, B at 5 s. Its intervals are also 2 s then 3 s.

• The shared 5-second finish time does not make the sequences identical. Without more detail, several paths or timing patterns between the points could fit.

What this example can show A paper schedule demonstrates how information is represented. It does not show whether a real person could or should perform a movement in that time.

A different way

Use three large A/B/C cards and arrange the supplied orders, or describe the difference without moving a token. There is no need to time yourself.

If you want to go further

Create a third schedule with the same 5-second finish but different arrival times. Explain what changed and what still cannot be inferred.

Something to notice

Have I confused a time on the clock with the duration between two events?

Read or explore more

Horizon topic Movement Sequences

https://launchhorizonhq.com/learn/movement-sequences/

Horizon topic Timing Pacing

https://launchhorizonhq.com/learn/timing-pacing/

Horizon topic Practice Skills

https://launchhorizonhq.com/learn/practice-skills/

CS Unplugged, University of Canterbury Kidbots

https://www.csunplugged.org/en/at-home/kidbots/

NRICH, University of Cambridge Olympic Records

https://nrich.maths.org/problems/olympic-records