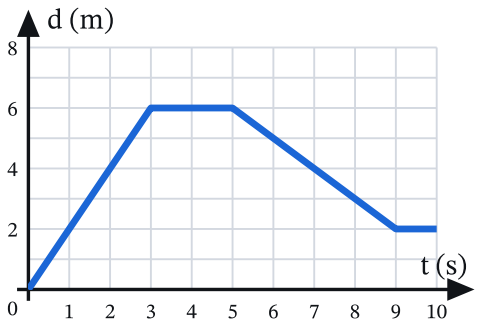
Names (pair) _____ Date _____

Distance–Time Graphs

Example



0–3 s: Ana walks from the start at 2 m/s.

3–5 s: she stands still at 6 m.

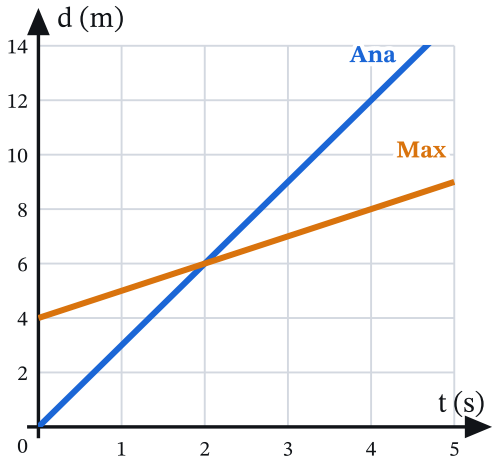
5–9 s: she **walks back** at 1 m/s.

The graph is not a picture of the track: a part going down means walking back, not walking downhill.

Remember

On a distance–time graph the **slope is the velocity**: steeper means faster, flat means standing still, going down means walking back. The **height** of the graph is the distance from the start, not the speed.

1 IN PAIRS Height or slope? Ana and Max walk along the same track.



Who is faster? ☐

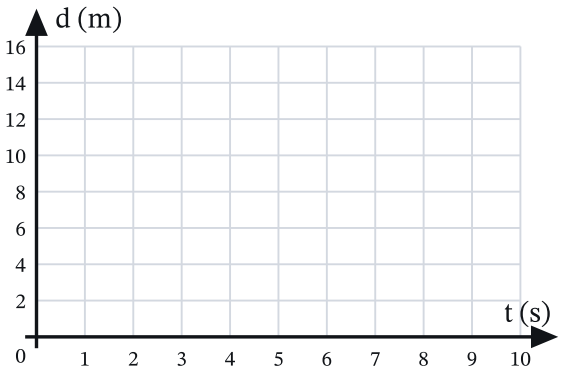
Who is further at $t = 1$ s? ☐

When are they the same distance? $t =$ ☐ s

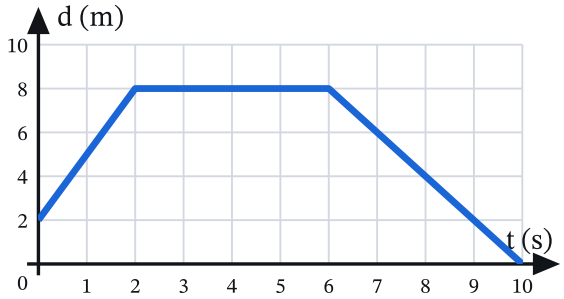
Speeds: Ana ☐ m/s, Max ☐ m/s

Names (pair) _____ Date _____

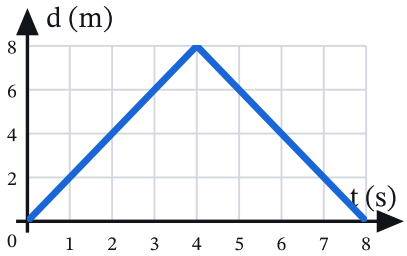
2 ON YOUR OWN Draw the graph: Max starts at 2 m, walks at 1 m/s for 4 s, stands still for 2 s, then runs at 2.5 m/s for 4 s.



3 ON YOUR OWN Tell the story the graph shows. Include the speeds.



4 IN PAIRS **Find the mistake.** Luka describes the graph: "Ana climbed a hill for 4 s and then went down it for 4 s."



The Motion Graphs app · otooly.com/motion-graphs

Story → graph and **Walk the graph** modes: try walking along the graph in task 3.

★ ON YOUR OWN **Exit card.** The graph is flat from 3 s to 5 s. What is the walker doing?