

Astronomy 2 – Special Relativity

Tutorial Question for week 5

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2 November 2000

Question

Show that the speed, relative to the platform, of the trains in figure 1 of part 3 of the lecture notes is $v = 1/3$. Remember that the train carriage is 6 m long, and that the clocks are showing times in units of metres. (Hint: what two events are simultaneous in the platform frame?)

Show that the time shown in figure 2 is correct.