

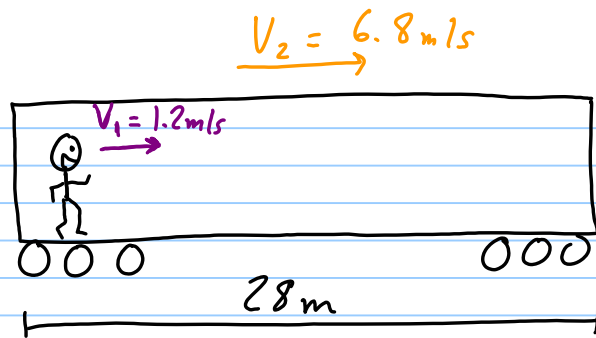
Quiz 1b

Note Title

27/09/2012

A tourist starts at the back of a train and walks towards the front at 1.2 m/s . The train is traveling East at 6.8 m/s .

- a) If the train car is 28 m long, how much time does it take for the tourist to reach the front?
- b) How far has the tourist moved relative to the ground in this time?



$$a) \quad v_1 = \frac{d_1}{t} \quad \checkmark \quad t = \frac{d_1}{v_1} = \frac{28 \text{ m}}{1.2 \text{ m/s}} = 23.33 \text{ s} = \boxed{23 \text{ s}} \quad \checkmark$$

$$b) \quad v_{\text{total}} = v_1 + v_2 \quad d_{\text{total}} = v_{\text{total}} \cdot t \quad \checkmark$$

$$= 1.8 + 6.2 \quad = (8.0 \text{ m/s})(23.33 \text{ s})$$

$$= \underline{8.0 \text{ m/s}} \quad \checkmark \quad = 186.7 = \boxed{190 \text{ m}} \quad \checkmark$$