Special and General Relativity (PHZ 4601/5606) Fall 2017 Solutions

Set 4

11. Rindler 2.9.

$$\triangle x = \beta \triangle t = 8\,,$$

$$(\triangle \tau)^2 = 64 = (\triangle t)^2 (1-\beta^2) = \frac{64\,(1-\beta^2)}{\beta^2}\,,$$

$$\beta^2 = 1-\beta^2 \;\Rightarrow\; \beta = \frac{1}{\sqrt{2}} = 0.7071\ldots\,.$$