

**Practice Quiz - Week #7 - 8.022**

**10 minutes, 10 points total**

**This is not assigned or required homework. Work on your own, if you wish and check your answers against the provided solutions.**

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**A rod of proper length  $l_0$  is oriented parallel to the  $x$  axis and moves with speed  $u$  along the same axis of the laboratory frame  $S$ . The same rod is observed by an observer on a moving frame  $S'$  that moves with velocity  $v$  with respect to  $S$  and along the same axis  $x$ . What is the length of the rod measured by the observer on  $S'$ .**