Answer on Question \#63076, Physics / Mechanics | Relativity
A pi meson is moving at a speed of 0.85 c relative to a flat surface. The flat surface has a length of 3.2 m when at rest on Earth. Calculate the length of the flat surface in the reference frame of the pi-meson.

Find: 1 - ?

## Given:

$\mathrm{v}=0.85 \mathrm{c}$
$\mathrm{I}_{0}=3.2 \mathrm{~m}$

## Solution:

$\mathrm{l}=\mathrm{l}_{0} \sqrt{1-\frac{\mathrm{v}^{2}}{\mathrm{c}^{2}}}(1)$
Of (1) $\Rightarrow I=1.69 \mathrm{~m}$

## Answer:

1.69 m

