Problem 3:

According to special relativity, a rod of length L moving at a velocity v will shorten by an amount δ, according to the formula:

$$\delta = L\left(1 - \sqrt{1 - \frac{v^2}{c^2}}\right),$$

where c is the speed of light. Calculate how much a rod that is 2 m long will contract when traveling at 5,000 m/s.

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16  v =  210051000 ;
17
18  2*(1 - sqrt(1 - (v^2)/((3e8)^2)))
```

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ans = 0.5720
```