Homework 1 Reflection

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1 Questions

1. I think my answer was good as it is. It is very similar to the second example solution.

2. For this answer I assumed that the person was inside the box without anything tools to help determine if the box is in an inertial reference frame because it wasn't specified and I didn't want to make assumptions. Based on the sample answers I can see that I didn't need to make that assumption, but I like my answer and I think it was creative.

3. This is different for the same reason as the previous answer and I like it even more.

4. I didn't think of the tidal forces, but, like you, I did say that in a way it is an interial reference frame and in a way it is also not.

2 Problems

1. The only real difference between your solution and my solution is skipped the step where you wrote $\Delta t = \gamma \Delta t'$.

2. I used the same process it just wrote it out more explicitly. I don't really know how to improve that.

3. Instead of calculating γ I calculated $\frac{1}{\gamma}$ from the begining. I think it is better to do it this way.

4. I didn't calculate γ separately first. I'm happy with the way I did this.

5. I used a sufficiently powerful calculator instead of an approximation. For this problem, I wrote everything except the final answer down correctly. I got the wrong answer because I forgot the square root when I typed it into my calculator.

6. I did this the same way as you. No changes.

3 Challengers

1. You found t' in terms of x' whereas I didn't bother and just left t' in terms of x after inverting, and then solved for x after the substitution. I prefer the way that I did it because it involved fewer steps.

2. I went wrong on this problem because in my answer I mistakenly assumed that $t_1 = t_2$.