

Module on Special Relativity: Assignment 2

This assignment covers chapter 2 (“Floating free), and chapter 3 (“Same laws for all”).

[Many of these problems are actually very easy.]

Acquire, loan, or borrow a copy of the textbook, and:

1. Do problem 2-6 on page 46 (the “horizontal extent of free-float frame” problem).
2. Do problem 2-8 on page 46 (the “vertical extent of free-float frame” problem).
3. Do problem 2-10 on page 46 (the “test particle?” problem).
4. Do problem 3-2 on page 78 (the “Einstein puzzler” problem).
5. Do problem 3-4 on page 78 (the “principle of relativity” problem).
6. Do problem 3-8 on page 80 (the “Cherenkov radiation” problem).
7. Do problem 3-10 on page 82 (the “expanding universe” problem).
8. Do problem 3-12 on page 84 (the “Michelson–Morley” problem).
9. Do problem 3-14 on page 88 (the “things that move faster than light” problem).
10. Do problem 3-16 on page 90 (the “superluminal expansion” problem).