

Physics 262: Homework 16
8 points

Problem 1 (1 point)

Use Lorentz transformations to show that the space-time interval Δs is the same length in any inertial reference frame. Can space-like separations ever be transformed into time-like separations? Explain using the concept of Δs .

Problem 2: (1 point)

Show the Lorentz transformations for x', t' and v'_x become the Galilean transformations in the limit of small V .

Problem 3 (1 point)

Ohanian 2.4

Problem 4 (1 points)

Ohanian 2.12

Problem 5 (1 point)

Ohanian 2.27

Problem 6 (1 point)

Ohanian 3.5

Problem 6 (1 points)

Ohanian 3.20

Problem 6 (1 points)

Ohanian 3.27