Concepts and Formulas

1. Galilean Relativity (session #1)
2. The postulates of Special Relativity (session #2)
   Basically that the speed of light is absolute.
3. Time Dilation (session #2)

   $$t = \frac{t_0}{\sqrt{1 - \frac{v^2}{c^2}}}$$

4. Proper time (session #2)
5. Length Contraction (session #2)

   $$L = L_0 \sqrt{1 - \frac{v^2}{c^2}}$$

6. Proper length (session #2)
7. Addition of velocities
8. Relativity of simultaneity
9. Space-time intervals
10. The Doppler effect
11. Mass
12. Galilean transform
13. Lorentz transform
14. Space-time diagrams