Homework problems #7

1. Show that the Riemann tensor transforms as a tensor.

2. Show that

\[
\frac{D T^\mu_\nu}{D \tau} = \frac{dT^\rho_\nu}{d\tau} + \Gamma_\lambda^\mu \frac{dx^\lambda}{d\tau} T^\rho_\nu - \Gamma^\sigma_\lambda T^\rho_\nu \frac{dx^\lambda}{d\tau} T^\mu_\sigma
\]

transforms as a tensor.