1) A spring has a stiffness value of 150 lbs/in. If a 350 lb force is applied, compute the stretch of the spring using Hooke’s Law.

2) Determine the tension in the three ropes due to the 30 kg weight. Take \( \theta = 25^\circ \). Make sure your FBD is clear and organized.

3) The members of a truss are connected to a gusset plate. Determine the magnitudes of \( F \) and \( T \) for equilibrium. Take \( \theta = 30^\circ \). Make sure your FBD is clear and organized.