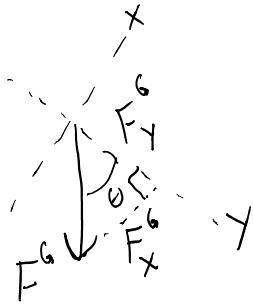
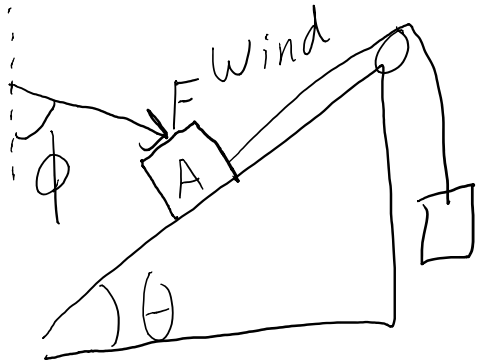


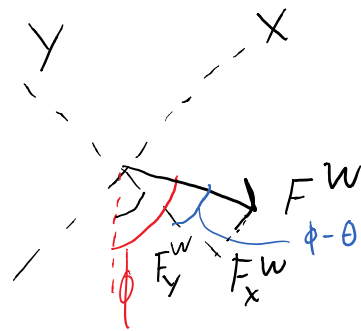
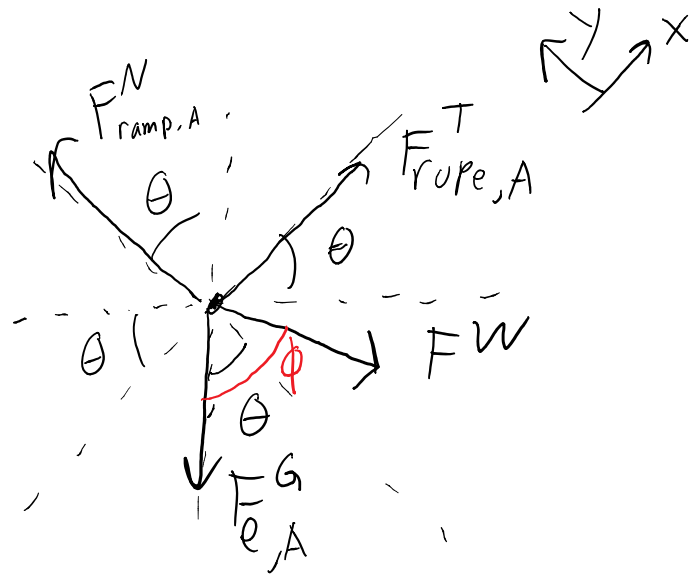
Translate the free body diagram below into equations using Newton's second law.



$$\sum F_x = m a_x$$

$$F_{rope,A}^T - F_x^G + F_x^W = m a_x$$

$$F_{rope,A}^T - F^G \sin \theta + F^W \sin(\phi - \theta) = m a_x$$



$$\sum F_y = m a_y$$

$$F_{ramp,A}^N - F_y^G - F_y^W = m a_y$$

$$F_{ramp,A}^N - F^G \cos \theta - F^W \cos(\phi - \theta) = 0$$