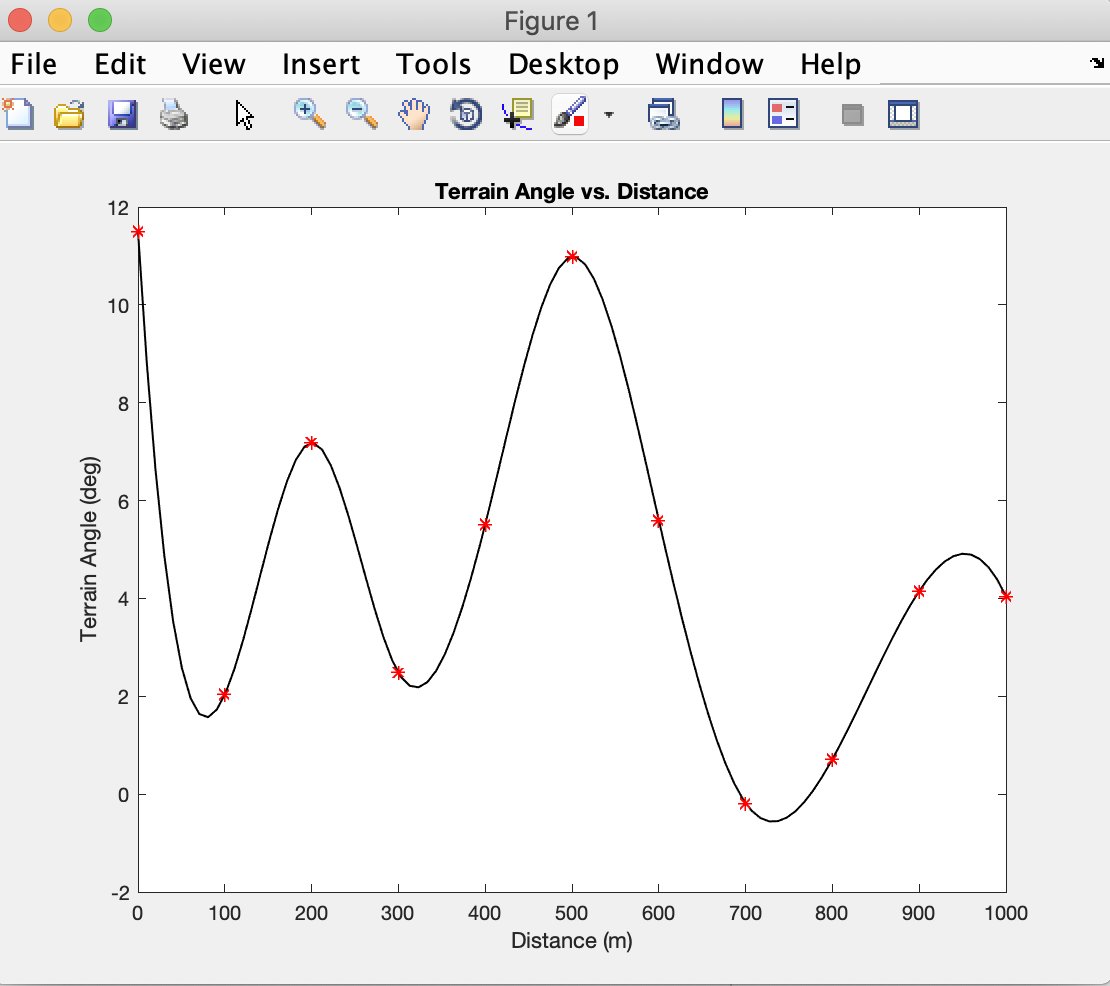
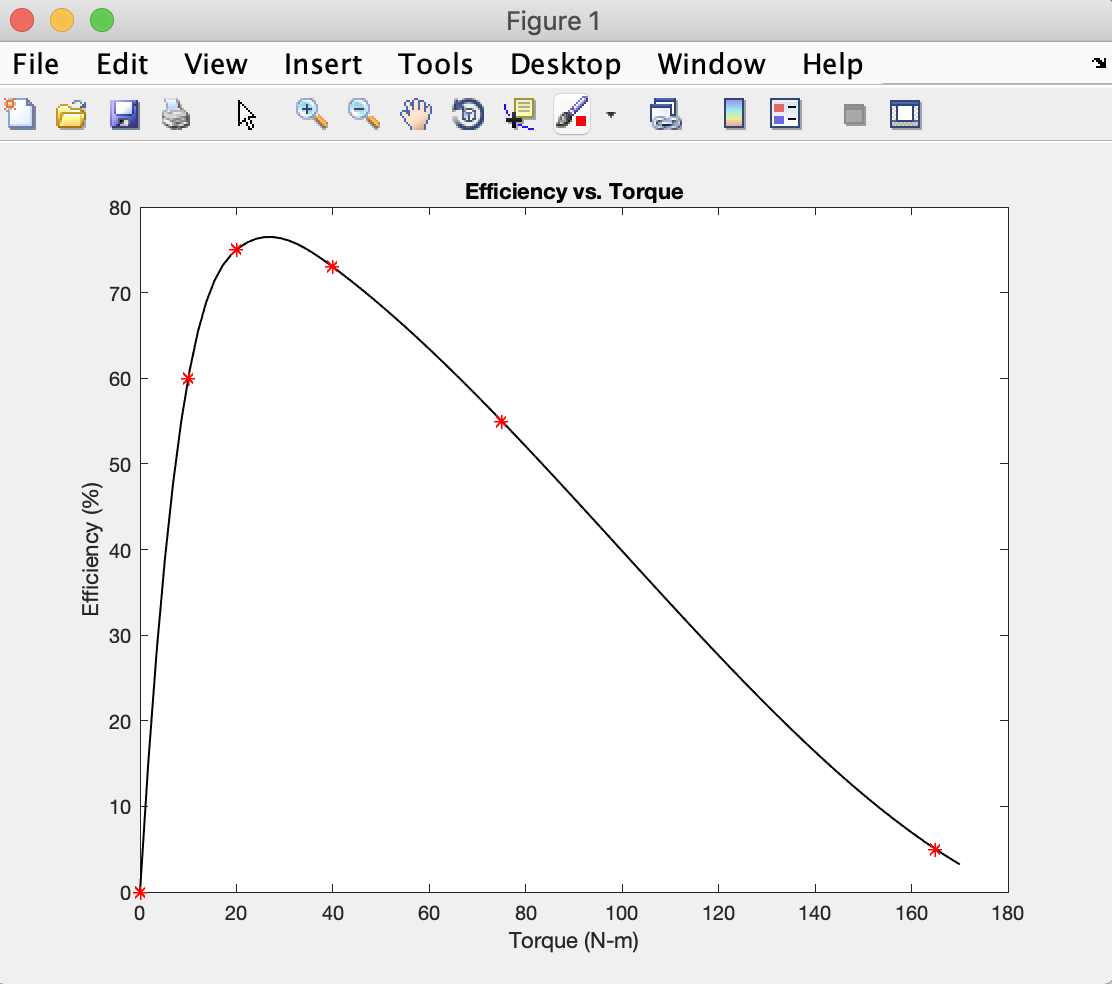
**Task 2:**

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As shown in the figure above, the terrain angle changes with relation to the distance the rover has covered. The changes in terrain angle may be due to mountainous terrain, which would require the rover to change angles based on the slope of the terrain it was encountering. As shown by the different fluctuations, the terrain has different amounts of slope over different distances resulting in the terrain angle change as the distance increases.

**Task 5:**



After making observations based on the figure presented above, it is seen that as the torque increases to a certain point, the efficiency increases to about 75%. Once this maximum point is reached the efficiency begins to decrease for the continuing torques. Overall this plot shows the rover has highest efficiency while at a torque of approximately 25 Nm. After this point, the efficiency is not worth the higher force as it eventually has an efficiency of almost 0%. To maximize the efficiency, the torque should try to be maintained between 20 and 40 Nm.

**Task 8:**