





(30 pts) Approx. 4 days

*Congratulations, LASA and the Lathrop Aeronautical Engineers: your hard work has finally paid off big! After 9 months in space, your satellite finally reached Mars and was able to survey the potential mission site. Your job is to help get data collected, and then use your results to create a map of the area. You'll then follow the Cartographer's Report to complete your map and get it printed so that you can start planning out your rover's big mission.*

To wrap up this part of the unit, you and your team need to collect data on the Martian surface using your satellite. Once you and your team have confirmed that your satellite works with a test mapping, Mr. Benshoof will send it Mars and relay your results. You'll then use your complete data set in Microsoft Excel to create and label your very own Martian map! Work together, and it'll all come together nicely.

- Data Collection:** Start by working with Mr. Benshoof to conduct a test-sampling using your satellite. Your test-sampling must work correctly before Mr. Benshoof can collect the Martian data.
- Technician's Report:** When your data set is complete, the Technician's report and your data will become available. Read through the Technician's Report with your team and make all necessary adjustments to the data set to make it usable. Then, use Excel to create a topographic map of the area.
- Cartographer's Report:** Follow the directions on the Cartographer's Report to name various features on the Martian Surface. When that work is complete, give your map file and all names to Mr. Benshoof for final map printing!
- Remote Surveying Reflection:** Take a page in your notebook and write a full-page reflecting on the ideas of remote sensing and the process of getting a satellite working. What are some of the potential benefits and applications of remote sensing that you think are cool? What are some of the challenges faced by engineers when trying to make remote sensing satellites? What about the process did you find fun and interesting? What parts were particularly difficult? What could make this kind of problem solving process easier in the future for you and your team?

Part 3: Tasks	10 points	8-5 points	4-0 points
 Data Collection Test-Sampling	+ You got a successful test-sample using your programmed satellite	- Your test sample was only partly successful	- You did not complete your test-sampling demonstration
	<b>5 points</b>	<b>4-3 point</b>	<b>2-1-0 points</b>
 Technician's Report	+ You followed the guidelines in the Technician's report to work with your data + You made your data a topographic map in Excel	- You only completed some of the Technician's procedures	- You did not work with your data - You did not complete any of the technician tasks
 Cartographer's Report	+ You followed the guidelines in the Cartographer's report + You named all the features that needed naming + You got your map turned in to Mr. Benshoof for printing	- You only completed some of the Cartographer's procedures	- You did not complete your map - You did not get your map print-ready
	<b>10 points</b>	<b>8-5 points</b>	<b>4-0 points</b>
 Remote Sensing Reflection	+ You completed your Remote Sensing Reflection	- Your reflection is missing important parts	- Your report is missing

