

Science 9
Unit E: Space Exploration
Lesson 1
Practice Worksheet 51: Azimuth and Altitude

Use the video **or** simulation as directed in the online course to answer the questions on this worksheet.

To use the simulation (not necessary if you choose to watch the video):

- Find the box titled "Labels".
- Under the heading "Individual label visibilities", click Zenith, Horizon Plane, and Meridian while watching what happens in the Horizon Diagram.
- Find the box titled "Star Position". Abbreviations for azimuth (az) and altitude (alt) have been used.

Complete the following questions.

Question 1

Click the azimuth (az) slider and move it as far to the left as possible as you watch what happens in the Horizon Diagram box. Record the degree that appears in the azimuth box.

Question 2

Click the azimuth (az) slider. Now move it as far to the right as possible while watching what happens in the Horizon Diagram box. Record the degree that appears in the azimuth box.

Question 3

Set your azimuth (az) slider at zero degrees. Click the altitude (alt) slider and move it to the far left. This represents the sky above the South Pole. Record the degree that appears in the altitude box.

Question 4

Click the altitude (alt) slider and move it to the far right. This represents the sky above the North Pole. Record the degree that appears in the altitude box.

Question 5

- a) Place the azimuth and altitude sliders at the degrees in the chart below.
- Record the direction of the star's location (northeast, southeast, northwest, or southwest).
 - Record the height of the star in the sky (low or high).

	Azimuth	Altitude	Direction of star's location	Height of star in the sky
i)	135 degrees	10 degrees		
ii)	220 degrees	70 degrees		

- b) When the altitude is a small number, is the star located close to or further away from the horizon?
- c) Is azimuth more similar to direction or height? Is altitude more similar to direction or height?

Congratulations! You have completed this practice worksheet.

Now it's time to carefully compare your answers to the suggested answers in the online course. When comparing, you should feel free to make changes to your answers or make extra notes.

Keep this practice worksheet for study purposes. Using practice worksheets as a study tool to review for exams is a great idea.

If you unsure about any of the questions or answers, or you just want more feedback, share this practice worksheet with your teacher and ask for assistance. You can do that by emailing the teacher, or by submitting it in the Course Questions Forum in the online course. If you are using this practice worksheet in Google Drive, don't forget to change the sharing settings so that anyone can view it before sending the link to your teacher.
