End of Unit 1 Assignment

This assignment consists of four parts. The first is a review with a couple of practice questions linked directly to their answers. The second is a short quiz that you take using WebCT. It will be instantly scored for you by WebCT; you only get one chance to take it, however, so be sure you are ready! The third part is an essay question. The question appears below; when you are ready to answer it, log on to WebCT and submit your essay. Finally, for each unit, you should log on to WebCT and contribute a question, an answer, or a comment to one of the posted topics. If you would like to introduce a new topic instead of contributing to an existing thread, please send your topic idea to your instructor. If you find the material in this unit challenging, you might want to start with the "discussion" part of the assignment in order to get some help with some of the ideas.

To use WebCT you will need to be signed up as a student in the course. That means that first you must enroll for credit and then you can login to WebCT. The instructor will verify that you are enrolled in the course and verify your enrollment in NorthStar.

Brief summary of Unit One:

Topics we have covered include the horizon system of coordinates (altitude and azimuth) and the effects of Earth's rotation on what you can see in the sky.

Before you go to the quiz, see how you do on these two questions. If you have trouble, you might want to review the unit, send a question to the discussion group, or seek help from the instructor.

Practice Question One
A bright star is shining in the southern sky about ten degrees south of your zenith. You email to your astronomer friends "What is that bright object at altitude (fill in) and azimuth (fill in)?" You (do or do not) need to tell your friends what time you made this observation.

Practice Question Two
In this diagram, which observers can see the red star? The blue one?
When you are ready, logon to WebCT and take Quiz One.

You will get instant feedback on your score on Quiz One (and your instructor will also be informed of your score). If your score is OK, you may proceed directly to the Essay Question One on WebCT. Otherwise, you might want to look at what you missed, ask your instructor about questions you missed, or review relevant parts of the unit.

**Essay Question**

About forty years ago, US astronomers got together and developed Kitt Peak National Observatory near Tucson. At nearly the same time, US astronomers working in collaboration with astronomers in Chile established a comparable observatory in Chile. Please explain (in sufficient detail to make it clear to someone with no background in astronomy) why it is that astronomers need to build telescopes in the southern hemisphere when they have some in the northern hemisphere.

When you are ready to answer this question, go to WebCT to write your answer.

**Alternative to the Essay Question**

If you have friends in South America with access to email, and a good starmap or some familiarity with constellations, you may replace the above Essay Question with this activity:
Arrange to be online at the same time some night. (There will be an hour or two of time
difference, most likely, but this should not cause a major problem.) Locate one of these
constellations in your sky, and ask your friend to do the same: Orion (best during mid-
winter evenings). Scorpius and/or Sagittarius (best during mid-summer evenings). Each
of you describe to the other, via email, where in the sky the constellation appears, and
how the stars are arranged relative to the horizon. Send copies of your email exchange to
your instructor. To describe where the constellation is in the sky, you may use altitude
and azimuth, if your friend is OK with those, or you may say "how high" and "North, NE,
East, SE, S... " instead.

Don't forget to contribute to the discussion on WebCT on one of the topics in this
unit!