

Name \_\_\_\_\_

Score \_\_\_\_\_

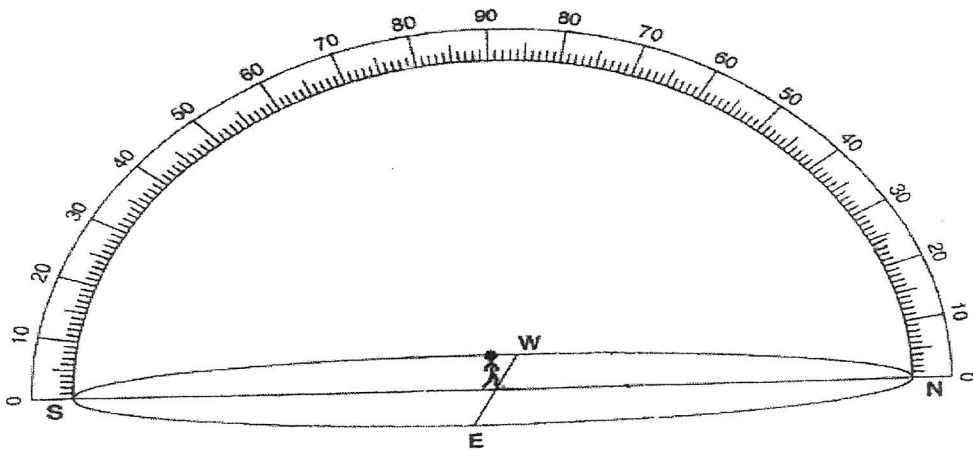
Free Response HW \_\_\_\_\_

Questions 1-3 directions:

- a) solve the equation to determine the altitude of the noon sun at the given locations
- b) plot the path of the Sun for the date given and for the altitude that you determined
- c) draw arrows on the Sun's apparent path to show the direction of movement
- d) label the position of sunrise and sunset
- e) indicate the duration of insolation at each location for the given date

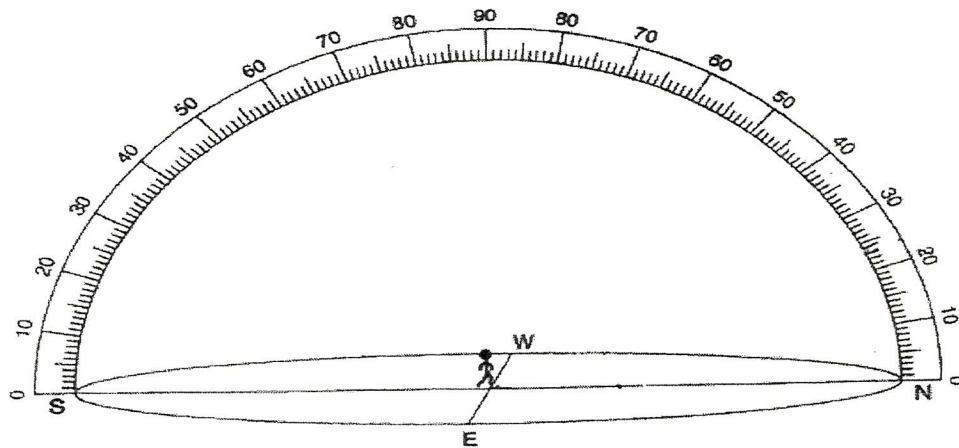
1) What is the altitude of the noon sun at  $41^{\circ}$  N on June 21<sup>st</sup>? **Show your work**

	Duration of Insolation
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2) What is the altitude of the noon sun at 25° N on March 21<sup>st</sup>? **Show your work**

	Duration of Insolation
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3) What is the altitude of the noon sun at 36° S on December 21<sup>st</sup>? **Show your work**

	Duration of Insolation
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