

Quiz #7/8 Takehome: Astrolabe

Name: _____

10 points Total

Due November 15 or 22

To answer all but the last two questions, set your astrolabe so that the star **Rigel is rising** (middle of star symbol on eastern horizon). All time references are local solar time (the time read directly from the astrolabe—no conversion). Answers should be given to the nearest degree, nearest 2 minutes, or nearest day.

1. What is Rigel's azimuth, to the nearest degree? (Note azimuth lines are every 5° .)
2. What bright star is located at azimuth 254° , altitude 29° ? (Note altitude lines are every 2° .)
3. What is the azimuth and altitude of Vega?

Azimuth:

Altitude:

4. True or False: When Rigel is rising, the star Sirius is visible.
5. If the date is March 20, what is the time represented by this astrolabe setting (Rigel rising) (to the nearest 2 minutes)? Remember a.m. or p.m.
6. If the date is April 30 (or May 0), what time does this astrolabe setting represent?

At this date and time, what is the sun's azimuth?

At this date and time, what is the sun's altitude?

7. For the same astrolabe setting (Rigel rising), what date is the sun setting? Make your estimate to the nearest day.
8. At the same astrolabe setting, what date would astronomical (morning) twilight begin?
9. (**Rigel not rising.) Set the astrolabe for sunrise on February 28. According to the astrolabe, what time does the sun rise?
10. (**Rigel not rising.) Onboard ship, we have been watching Altair getting lower. We measure its altitude to be 13° . If we head toward Altair, what direction will we be going?

The time is 1:55 a.m. What is the date?