

SCORE
(5 pts max)

**ASTRONOMY 2
Bonus Activity**

**ACTIVITY: Planisphere and Constellation
Chart Problems**

NAME

DATE

ID#

Use a planisphere and the SC001, SC002 Constellation Charts to solve five of the following problems. You may answer only one question from each of the following five categories and each correct answer is worth 1 point. Unless otherwise specified, all times are PST at a latitude of 40° N.

This bonus activity is due a week before the end of the semester, on the same day and time that the regular extra credit is due.

I. Given Time and Date, Determine Event

1. On February 10 at 10 PM, what bright star just rose?

2. On July 20 at 8:30 PM, what bright star (named on the planisphere) is crossing the meridian (transiting)?

3. On the date that Vega rises at 6 AM, what two stars (both named on the planisphere) are rising at 7 PM?

II. Given Time and Event, Determine Date

4. Kochab passes through the meridian at 9 PM in June, but it also passes through the meridian at 9 PM in what other month?

5. Mizar/Alcor rises at 3 AM on what date?

6. Arcturus crosses the meridian at 10 PM on what date?

III. Given Event and Date, Determine Time

7. What time do the three stars of Aries rise on August 5?

8. What time does the brightest star in Perseus rise six months after the Vernal Equinox?

9. What time does Altair transit on the Summer Solstice?

IV. Coincidental Events Involving the Sun

10. How many hours of daytime occur on the date that the sun is closest to Antares in the sky?

11. What time does the sun rise on August 1?

12. On what date does Aldebaran transit at noon?

V. Other Events Involving the Brain

13. What time would Mars rise on September 3, if it was in opposition with the sun?

14. During what month is the full moon lowest in the sky when it transits?

15. In which month does the Milky Way lie entirely along the horizon at 11pm?