
Exercise A7: Solar and Sidereal Days

Student name: _____ Class: _____ Date: _____

Check the box with the correct answer.

Question 1: What is the approximate length of an apparent solar day from June 21, 2010 to June 22, 2010?

- a. 24 hours 0 minutes 0 seconds
- b. 24 hours 0 minutes 13 seconds
- c. 23 hours 30 minutes 0 seconds
- d. 12 hours 30 minutes 12 seconds

Question 2: What is the approximate length of an **apparent solar day** from September 21, 2010 to September 22, 2010?

- a. 24 hours 0 minutes 0 seconds
- b. 24 hours 0 minutes 14 seconds
- c. 23 hours 59 minutes 39 seconds
- d. 23 hours 59 minutes 0 seconds

Question 3: What is the approximate length of a sidereal day from September 21, 2010 to September 22, 2010, when measured in the units of mean solar time used by Starry Night?

- a. 24 hours 0 minutes 0 seconds
- b. 24 hours 3 minutes 55 seconds
- c. 23 hours 59 minutes 5 seconds
- d. 23 hours 56 minutes 4 seconds

Question 4: Which of the following statements comparing a mean solar day of exactly 24 hours to a sidereal day is correct?

- a. A mean solar day is approximately 4 minutes shorter than a sidereal day.
- b. A mean solar day is approximately 4 minutes longer than a sidereal day.
- c. A mean solar day varies through the year but on average, it is about 4 minutes longer than one sidereal day.
- d. There is no difference between a mean solar day and a sidereal day.