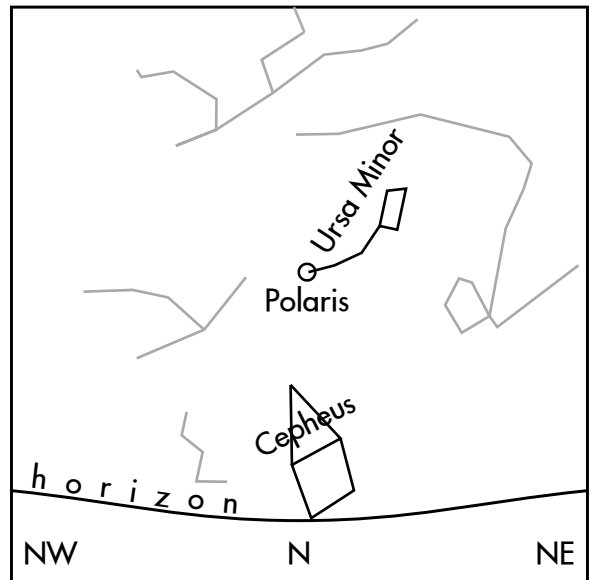


Closed book, closed notes. Clearly circle ("O") the one choice that you think is most definitely correct. Cross out ("x") only one choice that you think is definitely incorrect.

For questions (1)-(2), the diagram at right shows the northern horizon as seen by an observer at 12 AM in San Luis Obispo, CA. Ignore daylight saving time.



1. [4.0 points.] What date is this?
 - (A) March 5.
 - (B) May 20.
 - (C) September 5.
 - (D) November 10.

2. [4.0 points.] How many hours will pass until the constellation Cepheus reaches its highest point in the sky?
 - (A) 1 hour.
 - (B) 6 hours.
 - (C) 12 hours.
 - (D) 24 hours.

3. [4.0 points.] (If you can see stars in daylight), on February 5 the sun would be in front of the zodiac constellation:
 - (A) Leo.
 - (B) Cancer.
 - (C) Gemini.
 - (D) Capricornus.

4. [4.0 points.] Earth's _____ causes sun to appear in front of different zodiac constellations, as seen by an observer in San Luis Obispo, CA.
 - (A) tilt.
 - (B) rotation.
 - (C) revolution.
 - (D) precession.
 - (E) (More than one of the above choices.)

For questions (5)-(6), an observer in San Luis Obispo, CA watches the sun in June.

5. [4.0 points.] On this day, the sun will set on the horizon at a point:
 - (A) between northeast and east.
 - (B) due east.
 - (C) between east and southeast.
 - (D) between southwest and west.
 - (E) due west.
 - (F) between west and northwest.

6. [4.0 points.] As soon as _____ later, the sun will rise on the horizon due east.
 - (A) 10 hours.
 - (B) 12 hours.
 - (C) 14 hours.
 - (D) One month.
 - (E) Three months.
 - (F) Six months.

Questions (7)-(10) are continued on the back of this page.

Closed book, closed notes. Clearly circle ("O") the one choice that you think is most definitely correct. Cross out ("x") only one choice that you think is definitely incorrect.

This quiz continues from questions (1)-(6) on the other side of this page.

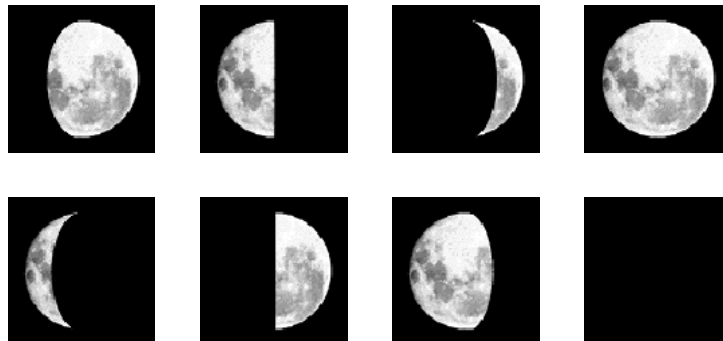
7. [4.0 points.] What time is it when the third quarter moon is overhead?

- (A) 12:00 PM (noon).
- (B) 3:00 PM (afternoon).
- (C) 6:00 PM (sunset).
- (D) 9:00 PM (evening).
- (E) 12:00 AM (midnight).
- (F) 3:00 AM (wee hours).
- (G) 6:00 AM (sunrise).
- (H) 9:00 AM (morning).

8. [4.0 points.] What time is it when the third quarter moon is setting?

- (A) 12:00 PM (noon).
- (B) 3:00 PM (afternoon).
- (C) 6:00 PM (sunset).
- (D) 9:00 PM (evening).
- (E) 12:00 AM (midnight).
- (F) 3:00 AM (wee hours).
- (G) 6:00 AM (sunrise).
- (H) 9:00 AM (morning).

9. [4.0 points.] Which phase will the moon have when it is highest overhead at 9:00 PM? Clearly circle your answer below.



10. [4.0 points.] Which phase will the moon have when it is rising at 9:00 PM? Clearly circle your answer below.

