

## Astronomy 1.3 Answer Keys

### For Worksheets

#### Phases, Eclipses, and Tides

##### Guided Reading and Study

**Use Target Reading Skills** This is one possible way to complete the graphic organizer. Accept all logical responses.

1. b, c, d
2. These are all caused by the changing relative positions of the moon, Earth, and sun.
3. phases
4. It goes through a whole set of phases each time it revolves around Earth about once every 29.5 days.
5. It depends on how much of the sunlit side of the moon faces Earth.
6. **a.** Half of the side of the moon facing Earth is lighted. **b.** All of the side of the moon facing Earth is lighted. **c.** Half of the side of the moon facing Earth is lighted. **d.** The near side is not always the dark side. The near side is the dark side during a new moon. The far side is the dark side during a full moon. **e.** You see about half.
7. An eclipse occurs.
8. **a.** Solar  
**b.** Lunar
9. umbra
10. The moon passes directly between Earth and the sun, blocking sunlight from reaching Earth.
11. penumbra
12. b, c
13. Earth is directly between the moon and the sun.
14. b, c, d
15. tides
16. gravity
17. Tides occur mainly because of differences in how much the moon's gravity pulls on different parts of Earth.
18. a, d
19. A spring tide is a tide with the greatest difference between consecutive low tides and high tides.
20. A neap tide is a tide with the least difference between consecutive low tides and high tides.
21. In the left illustration, the moon should be drawn in at the 9:00 or 3:00 position on the orbit around Earth; in the right illustration, at the 6:00 or 12:00 position.
22. a, c

#### Phases, Eclipses, and Tides

##### Review and Reinforce

1. New moon, waxing crescent, first quarter, full moon, waning gibbous, third quarter
2. spring, neap, spring, neap
3. neap
4. eclipse
5. penumbra
6. tides
7. umbra
8. phase
9. spring
10. lunar
11. solar
12. gravity

##### ADAPTED READING & STUDY

#### Phases, Eclipses, and Tides

1. a, c
2. phases
3.
  - a. You can see half of the sunlit side.
  - b. The entire sunlit side faces Earth.
  - c. You can see half of the sunlit side.
4. eclipse
5. Lines from the moon should be drawn to Earth.
6. false
7.
  - a. lunar eclipse
  - b. solar eclipse
8. true
9.
  - a. spring tide
  - b. tides
  - c. neap tide
10. a, b