

Skills Worksheet

Concept Review

In the space provided, write the letter of the description that best matches the term or phrase.

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|------------------------------|---|
| _____ 1. big bang theory | a. star group that can be elongated like a stretched-out football |
| _____ 2. constellation | b. the brightness a star would have at a distance of 32.6 light-years from Earth |
| _____ 3. light-year | c. the time in the life of a star when it generates energy by the fusion of hydrogen into helium in its core |
| _____ 4. spiral galaxy | d. an extremely bright area located in the center of some galaxies |
| _____ 5. absolute magnitude | e. the distance light travels in a single year |
| _____ 6. irregular galaxy | f. star group that has low mass, no particular shape, and is rich in dust and gas |
| _____ 7. elliptical galaxy | g. the theory that all matter and energy was compressed into a small volume and then exploded billions of years ago |
| _____ 8. main-sequence stage | h. a fixed pattern of stars and the region of space around it |
| _____ 9. apparent magnitude | i. star group with a nucleus of bright stars and flattened arms that spiral around the nucleus |
| _____ 10. quasar | j. the brightness of a star as seen from Earth |

In the space provided, write the letter of the answer choice that best completes each statement or best answers each question.

- _____ 11. Which stars have left the main sequence?
- nebula, nuclei, plasma
 - giants, supergiants, white dwarfs
 - quasars, pulsars, constellations
 - planets, galaxies, nova
- _____ 12. How far away is the closest galaxy to the Milky Way?
- 17,000,000 miles
 - 5 million light-years
 - 170,000 light-years
 - 5 billion kilometers

Concept Review *continued*

- _____ 13. Why are scientists able to use spectra to determine the composition of stars?
- because all stars have the same composition as Earth
 - because every chemical element has a characteristic spectrum
 - because chemical elements do not have characteristic spectra
 - because colors and lines in the spectra of stars are all the same
- _____ 14. What did Hubble discover that indicated that the universe is expanding?
- Only stars in the main sequence are moving away from Earth.
 - Galaxies are moving closer to Earth.
 - Spectras of galaxies were shifted toward the blue end.
 - Spectras of galaxies were shifted toward the red end.
- _____ 15. What type of star may become a pulsar?
- a neutron star
 - the sun
 - a white dwarf
 - a nebula
- _____ 16. What indicates the surface temperature of a star?
- the star's mass
 - the star's age
 - the star's distance from Earth
 - the star's color
- _____ 17. What marks the transition of a protostar to a star?
- the end of nuclear fusion
 - the beginning of nuclear fusion
 - the beginning of nuclear fission
 - the end of nuclear fission
- _____ 18. Which of these is considered to be evidence of the big bang?
- absolute zero
 - the existence of black dwarf stars
 - cosmic background radiation
 - the asteroid belt
- _____ 19. What is a nova?
- a main-sequence star
 - a black hole
 - a star that suddenly becomes brighter.
 - a nebula
- _____ 20. Why do stars appear to move in the sky?
- because of the movement of Earth
 - because of the big bang
 - because they are actually moving closer to Earth
 - because of the movement of the sky