|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. Why is scientific notation used in science?   |  |  |  | | --- | --- | --- | |  | a. | because it makes it easy to write very big or very small numbers | |  | b. | because all astronomical distances are expressed in metric units | |  | c. | because it makes conversions between units easy | |  | d. | because it makes conversions between distances easy |  |  |  | | --- | --- | | *ANSWER:* | a | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2. What is the approximate diameter of the Earth?   |  |  |  | | --- | --- | --- | |  | a. | 1 AU | |  | b. | 13,000 light-years | |  | c. | 13,000 kilometres | |  | d. | 1,000,000 kilometres |  |  |  | | --- | --- | | *ANSWER:* | c | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3. What is the average distance from Earth to the Sun?   |  |  |  | | --- | --- | --- | |  | a. | 1 ly | |  | b. | 1 AU | |  | c. | 1 million km | |  | d. | 1 billion km |  |  |  | | --- | --- | | *ANSWER:* | b | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 4. Which one of the following statements best describes a planet?   |  |  |  | | --- | --- | --- | |  | a. | a non-luminous body | |  | b. | an irregular shape | |  | c. | a body that generates energy by nuclear fusion | |  | d. | a body located at the centre of the Solar System |  |  |  | | --- | --- | | *ANSWER:* | a | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5. Which one of the following statements best describes the Sun?   |  |  |  | | --- | --- | --- | |  | a. | generates energy by nuclear fusion | |  | b. | located 10 AU from Earth | |  | c. | orbiting the Solar System | |  | d. | located in the centre of the Milky Way |  |  |  | | --- | --- | | *ANSWER:* | a | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6. What does the Solar System contain?   |  |  |  | | --- | --- | --- | |  | a. | the Sun, its planets, and some smaller bodies | |  | b. | the Sun, galaxies, planets, and stars | |  | c. | the Sun, planets, moons, and stars | |  | d. | the Sun, planets, asteroids, and galaxies |  |  |  | | --- | --- | | *ANSWER:* | a | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 7. Approximately how many times larger than the diameter of a typical planet (the Earth) is the diameter of a typical star (the Sun)?   |  |  |  | | --- | --- | --- | |  | a. | 10 times | |  | b. | 100 times | |  | c. | 1000 times | |  | d. | 10,000 times |  |  |  | | --- | --- | | *ANSWER:* | b | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8. How does the radius of the Moon’s *orbit* compare to the radius of the Earth?   |  |  |  | | --- | --- | --- | |  | a. | It is 0.6 times as large. | |  | b. | It is 6 times as large. | |  | c. | It is 60 times as large. | |  | d. | It is 600 times as large. |  |  |  | | --- | --- | | *ANSWER:* | c | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9. Which of the following is no longer considered a major planet?   |  |  |  | | --- | --- | --- | |  | a. | Mercury | |  | b. | Uranus | |  | c. | Pluto | |  | d. | Saturn |  |  |  | | --- | --- | | *ANSWER:* | c | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10. In the diagram, what is the diameter of Mercury?   |  |  |  | | --- | --- | --- | |  | a. | about 240 km | |  | b. | about 2400 km | |  | c. | about 24,000 km | |  | d. | about 240,000 km |  |  |  | | --- | --- | | *ANSWER:* | b | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11. If the distance from the Sun to the Earth is represented by roughly 15 metres, then what would the distance from the Earth to the Moon on the same scale be?   |  |  |  | | --- | --- | --- | |  | a. | about 30 metres | |  | b. | about 10 metres | |  | c. | about 1 metre | |  | d. | smaller than the width of your hand |  |  |  | | --- | --- | | *ANSWER:* | d | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12. Earth has a radius of about 6400 km, the Sun has a radius of about 7.0×105 km, and a rubber ball has a radius of 6.4 cm. If you were to construct a scale model of the Solar System using the rubber ball to represent Earth, what is the radius of a ball needed to represent the Sun in your model?   |  |  |  | | --- | --- | --- | |  | a. | 7.0 × 105 cm | |  | b. | 7.0 cm | |  | c. | 700 cm | |  | d. | 70 cm |  |  |  | | --- | --- | | *ANSWER:* | c | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13. How is a planet different from a star?   |  |  |  | | --- | --- | --- | |  | a. | Planets are larger than stars. | |  | b. | Planets reflect light, while stars produce their own light. | |  | c. | Stars move faster in the sky than planets. | |  | d. | Planets are brighter than stars. |  |  |  | | --- | --- | | *ANSWER:* | b | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14. Which of the following is the smallest?   |  |  |  | | --- | --- | --- | |  | a. | size of a typical planet | |  | b. | 1 AU | |  | c. | 1 light-year | |  | d. | size of a typical galaxy |  |  |  | | --- | --- | | *ANSWER:* | a | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 15. Assume the size of the Sun is represented by a baseball (diameter about 7 cm). At this scale, the Earth is about 15 metres (150 million km or 8 light-minutes) away. How far away, to scale, would the nearest stars to the Sun be? Pick the closest answer.   |  |  |  | | --- | --- | --- | |  | a. | about the distance between Windsor and Toronto (about 400 km) | |  | b. | about 100 metres away | |  | c. | about the distance across Canada from Toronto to Vancouver (about 4300 km) | |  | d. | about the distance across 50 football fields (50 x 100 m, or 5 km) |  |  |  | | --- | --- | | *ANSWER:* | c | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 16. In the diagram, what is the diameter of Jupiter?   |  |  |  | | --- | --- | --- | |  | a. | about 7.0 × 104 km | |  | b. | about 7.0 × 105 km | |  | c. | about 1.4 × 104 km | |  | d. | about 1.4 × 105 km |  |  |  | | --- | --- | | *ANSWER:* | d | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 17. What is 5.7×107 the same as?   |  |  |  | | --- | --- | --- | |  | a. | 5.7 million | |  | b. | 57 thousand | |  | c. | 570 thousand | |  | d. | 57 million |  |  |  | | --- | --- | | *ANSWER:* | d | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 18. What is 1.95 billion the same as?   |  |  |  | | --- | --- | --- | |  | a. | 1.95 × 1012 | |  | b. | 1.95 × 109 | |  | c. | 1.95 × 106 | |  | d. | 1.95 × 105 |  |  |  | | --- | --- | | *ANSWER:* | b | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 19. How many centimetres are there in one kilometre?   |  |  |  | | --- | --- | --- | |  | a. | 100 | |  | b. | 1,000 | |  | c. | 10,000 | |  | d. | 100,000 |  |  |  | | --- | --- | | *ANSWER:* | d | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 20. What is one thousandth of one metre?   |  |  |  | | --- | --- | --- | |  | a. | one kilometre | |  | b. | one centimetre | |  | c. | one millimetre | |  | d. | one hectometre |  |  |  | | --- | --- | | *ANSWER:* | c | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 21. Which of the following has the distances arranged in order from smallest to largest?   |  |  |  | | --- | --- | --- | |  | a. | kilometre, light year, millimetre, Astronomical Unit | |  | b. | Astronomical Unit, millimetre, light year, kilometre | |  | c. | millimetre, kilometre, Astronomical Unit, light year | |  | d. | light year, kilometre, Astronomical Unit, millimetre |  |  |  | | --- | --- | | *ANSWER:* | c | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 22. Which of the following has the distances arranged in order from largest to smallest?   |  |  |  | | --- | --- | --- | |  | a. | light year, Astronomical Unit, kilometre, millimetre | |  | b. | Astronomical Unit, millimetre, light year, kilometre | |  | c. | kilometre, millimetre, Astronomical Unit, light year | |  | d. | light year, kilometre, Astronomical Unit, millimetre |  |  |  | | --- | --- | | *ANSWER:* | a | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 23. It takes light 1.3 seconds to travel from the Moon to Earth and 8 minutes for light to travel from the Sun to Earth. Which of the following statements is true?   |  |  |  | | --- | --- | --- | |  | a. | The Sun is 6.2 times farther from Earth than the Moon. | |  | b. | The Sun is 10 times farther from Earth than the Moon. | |  | c. | The Sun is 370 times farther from Earth than the Moon. | |  | d. | The Sun is 0.10 times farther from Earth than the Moon. |  |  |  | | --- | --- | | *ANSWER:* | c | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 24. If light takes 8 minutes to travel from the Sun to Earth, and over 4 hours to travel from the Sun to the planet Neptune, what is the distance from the Sun to Neptune?   |  |  |  | | --- | --- | --- | |  | a. | 5 AU | |  | b. | 30 AU | |  | c. | 30 ly | |  | d. | 5 ly |  |  |  | | --- | --- | | *ANSWER:* | b | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 25. How long does it take for light to travel from the Sun to Neptune?   |  |  |  | | --- | --- | --- | |  | a. | several seconds | |  | b. | several minutes | |  | c. | several hours | |  | d. | several weeks |  |  |  | | --- | --- | | *ANSWER:* | c | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 26. The speed of light is 3.0×105 km/s, and it takes 1.3 seconds for light to travel from the Moon to Earth. Based on this information, what is the distance from the Earth to the Moon?   |  |  |  | | --- | --- | --- | |  | a. | 390,000 km | |  | b. | 230,000 km | |  | c. | 3.9 km | |  | d. | 2.3 km |  |  |  | | --- | --- | | *ANSWER:* | a | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 27. Which sequence is correct when ordered by increasing size?   |  |  |  | | --- | --- | --- | |  | a. | Earth, Solar System, Milky Way Galaxy, clusters of galaxies | |  | b. | Solar System, Earth, galaxy clusters, Milky Way Galaxy | |  | c. | Earth, Milky Way Galaxy, Solar System, galaxy clusters | |  | d. | galaxy clusters, Solar System, Milky Way Galaxy, Earth |  |  |  | | --- | --- | | *ANSWER:* | a | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 28. How does one light-year relate to Astronomical Units, roughly?   |  |  |  | | --- | --- | --- | |  | a. | 63,000 AU | |  | b. | 10,000 AU | |  | c. | 380,000 AU | |  | d. | 1,400 AU |  |  |  | | --- | --- | | *ANSWER:* | a | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 29. What does a typical galaxy like our Milky Way galaxy contain?   |  |  |  | | --- | --- | --- | |  | a. | primarily planets | |  | b. | gas only | |  | c. | stars (some with planets), gas, and dust | |  | d. | a single star and planets |  |  |  | | --- | --- | | *ANSWER:* | c | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 30. If the distance to a star is 450 light-years, what can we conclude about the star?   |  |  |  | | --- | --- | --- | |  | a. | The star is 450 million AU away. | |  | b. | The star’s light takes 450 years to reach us. | |  | c. | The star must have formed 450 billion years ago. | |  | d. | The star must be very young. |  |  |  | | --- | --- | | *ANSWER:* | b | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 31. How long does it take for light to cross the Milky Way galaxy?   |  |  |  | | --- | --- | --- | |  | a. | about 8 minutes | |  | b. | about 8 years | |  | c. | about 80,000 years | |  | d. | about 200 million years |  |  |  | | --- | --- | | *ANSWER:* | c | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 32. Which statement best describes the Milky Way Galaxy?   |  |  |  | | --- | --- | --- | |  | a. | It contains about 100 billion stars. | |  | b. | It is about 400 light-years in diameter. | |  | c. | It is the largest known object in the universe. | |  | d. | It contains numerous clusters and superclusters. |  |  |  | | --- | --- | | *ANSWER:* | a | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 33. What is the name of the hazy band of light that circles our sky, produced by the glow of our galaxy?   |  |  |  | | --- | --- | --- | |  | a. | the Milky Way | |  | b. | the Solar System | |  | c. | a spiral arm | |  | d. | Alpha Centauri |  |  |  | | --- | --- | | *ANSWER:* | a | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 34. If we say that an object is 1,000 light-years away, how does that affect how we see it?   |  |  |  | | --- | --- | --- | |  | a. | We see it as it looked 1,000 years ago. | |  | b. | We see it as it would appear to our ancestors 1,000 years ago. | |  | c. | We see it as it looked 1,000 light-years ago. | |  | d. | We see it as it is right now, but it appears 1,000 times dimmer. |  |  |  | | --- | --- | | *ANSWER:* | a | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 35. What is the implication if the distance to the nearest star is 4.2 light-years?   |  |  |  | | --- | --- | --- | |  | a. | The star is 4.2 million AU away. | |  | b. | The light we see left the star 4.2 years ago. | |  | c. | The star must be very old. | |  | d. | The star must be very young. |  |  |  | | --- | --- | | *ANSWER:* | b | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 36. Which statement best describes the Milky Way Galaxy?   |  |  |  | | --- | --- | --- | |  | a. | It is a spiral galaxy. | |  | b. | It is comprised of several smaller galaxies. | |  | c. | It is about 1,000 light-years in diameter. | |  | d. | It is type of supercluster. |  |  |  | | --- | --- | | *ANSWER:* | a | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 37. What is the reason for compressing the history of the universe into a single year in the cosmic calendar?   |  |  |  | | --- | --- | --- | |  | a. | to compare astronomical timescales with human experience | |  | b. | to emphasize how old the universe is | |  | c. | to simplify calculations of ages of objects in the universe | |  | d. | to express the distances of objects in light-years |  |  |  | | --- | --- | | *ANSWER:* | a | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 38. Using the cosmic calendar, where the Big Bang happened January 1, in what month did the Milky Way form?   |  |  |  | | --- | --- | --- | |  | a. | January | |  | b. | March | |  | c. | August | |  | d. | December |  |  |  | | --- | --- | | *ANSWER:* | b | |

|  |  |  |
| --- | --- | --- |
| 39. The name of the average distance from Earth to the Sun is one \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | Astronomical Unit | |

|  |  |  |
| --- | --- | --- |
| 40. Light takes about 8 minutes to travel from the Sun to Earth and about 40 minutes to travel from the Sun to Jupiter. Jupiter is about \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ AU from the Sun.   |  |  | | --- | --- | | *ANSWER:* | five (5) | |

|  |  |  |
| --- | --- | --- |
| 41. The number 52,700,000,000 would be written in scientific notation as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | 5.27 × 1010 | |

|  |  |  |
| --- | --- | --- |
| 42. A(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the largest known structure in the universe.   |  |  | | --- | --- | | *ANSWER:* | filament | |

|  |  |  |
| --- | --- | --- |
| 43. A(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the distance that light would travel in one year.   |  |  | | --- | --- | | *ANSWER:* | light-year | |

|  |  |  |
| --- | --- | --- |
| 44. A cluster of galaxy clusters is called a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | supercluster | |

|  |  |  |
| --- | --- | --- |
| 45. Proxima Centauri is 4.2 ly away. That means that it takes light \_\_\_\_\_\_\_\_ years to travel from Proxima Centauri to the Earth.   |  |  | | --- | --- | | *ANSWER:* | 4.2 | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 46. The average distance from Earth to the Sun is 1 AU.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 47. The nearest star is 1 ly from the Solar System.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 48. A light-year is the distance that light travels in one year.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 49. A kilometre contains 1 million metres.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 50. The Sun is a star in the Milky Way Galaxy.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 51. The metric system is a decimal system.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 52. 3.49 × 107 km is the same as 3.49 × 104 m.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 53. The numbers 9.85 × 105 and 985,000 are equivalent.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 54. An astronomical unit is larger than a light-year.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 55. The Sun is located at the centre of the Milky Way.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 56. A supercluster refers to a large group of stars within the Milky Way.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | |

|  |  |  |
| --- | --- | --- |
| 57. Explain the difference between a light-year and the orbital period of Earth.   |  |  | | --- | --- | | *ANSWER:* | Answer not provided. | |

|  |  |  |
| --- | --- | --- |
| 58. What is scientific notation? Explain.   |  |  | | --- | --- | | *ANSWER:* | Answer not provided. | |

|  |  |  |
| --- | --- | --- |
| 59. Why would the English system of units be more useful if a foot contained 10 inches?   |  |  | | --- | --- | | *ANSWER:* | Answer not provided. | |

|  |  |  |
| --- | --- | --- |
| 60. Why do we measure some distances in astronomy in light-years and some in astronomical units?   |  |  | | --- | --- | | *ANSWER:* | Answer not provided. | |

|  |  |  |
| --- | --- | --- |
| 61. From what you know about astronomical units and light-years, how would you define a light-minute?   |  |  | | --- | --- | | *ANSWER:* | Answer not provided. | |

|  |  |  |
| --- | --- | --- |
| 62. “I live 20 minutes from Centre City.” How is this statement similar to giving astronomical distances in light-years?   |  |  | | --- | --- | | *ANSWER:* | Answer not provided. | |

|  |  |  |
| --- | --- | --- |
| 63. Describe the difference between a solar system and a galaxy.   |  |  | | --- | --- | | *ANSWER:* | Answer not provided. | |

|  |  |  |
| --- | --- | --- |
| 64. Considering that the Sun is about 1/100 AU in diameter and a typical planet like Earth is 1/10,000 AU, discuss whether or not our Solar System is crowded or empty.   |  |  | | --- | --- | | *ANSWER:* | Answer not provided. | |

|  |  |  |
| --- | --- | --- |
| 65. Briefly describe the scientific method.   |  |  | | --- | --- | | *ANSWER:* | No answer provided. | |