**Astronomy Assessment and TPS Questions:**

**Sun Size**

1. Jupiter is five times farther from the Sun than Earth. Approximately how many Suns would fit between the Sun and Jupiter?
2. 5
3. 10
4. 50
5. 150
6. 550
7. How many Moon orbital diameters would fit between the Sun and Earth?
   1. 2
   2. 30
   3. 110
   4. 220
   5. 440
8. How many Moon orbital diameters would fit across a star five times larger than the Sun?
9. 5
10. 10
11. 20
12. 50
13. 550
14. Approximately how many Moons would fit between the Earth and the Moon?.
    1. 30
    2. 50
    3. 120
    4. 150
    5. 220
15. If ten Jupiters can fit across the surface (width) of the Sun, then approximately how many Earth’s could fit across Jupiter?
16. 2
17. 5
18. 10
19. 50
20. 100
21. If you were constructing a scale model of the solar system that used a Sun that was the size of a basketball (~ 12” diameter), which of the following lengths would most closely approximate the scaled distance between Earth and the Sun?
    1. 3 feet (length of an outstretched arm)
    2. 10 feet (height of a basketball goal)
    3. 100 feet (height of an 8 story building)
    4. 300 feet (length of a football field)
22. If you were constructing a scale model of the solar system that used an Earth that was the size of a large beach ball (3 feet), which of the following sizes would most closely approximate the scaled size of the Sun in your model?
23. 10 feet (height of a basketball goal)
24. 30 feet (length of a school bus)
25. 100 feet (height of an 8 story building)
26. 300 feet (length of a football field)
27. Jupiter is ten times larger than Earth. Which of the following combinations would make a good scale model of Jupiter and the Sun?
28. a basketball and a soccer ball
29. a basketball and a baseball
30. a basketball and a ping-pong ball
31. a basketball and a pea
32. a basketball and a grain of sand
33. Our Sun will eventually become a white dwarf in five to six billion years. The Sun’s current diameter is about 100 times the diameter of a typical white dwarf. A white dwarf’s diameter then is most similar to which of the following?
    1. The diameter of the Moon.
    2. The diameter of the Earth.
    3. The diameter of the Moon’s orbit around the Earth.
    4. The radius of the Moon’s orbit around the Earth.
34. How many Moons can fit across the diameter of Earth?
    1. 2
    2. 4
    3. 5
    4. 6
35. How many Moon orbits can fit across the diameter of the Sun?
    1. 1/2
    2. 2
    3. 3
    4. 4
36. How many times could Earth’s diameter fit across the Moon?
    1. 4
    2. ¼
    3. 2
    4. ½
37. The diameter of the Moon’s orbit is equal to how many times the Sun’s diameter?
    1. 4x the Sun’s diameter
    2. ¼ x the Sun’s diameter
    3. 2x the Sun’s diameter
    4. ½ x the Sun’s diameter
38. The diameter of Earth is equal to how many Moons?
    1. 2
    2. 6
    3. 10
    4. None of the above
39. \_\_\_\_\_\_\_\_\_\_\_\_ would equal the diameter of the Sun.
    1. 10 Earths
    2. 30 Earths
    3. 2 Moon orbits
    4. 20 Moon orbits
40. The diameter of the Sun is 100 times the
    1. diameter of the Moon.
    2. diameter of Earth.
    3. distance between the Moon and Earth.
    4. distance between the Sun and Earth.
41. The distance between the Sun and Earth is approximately how many times the diameter of the Sun?
    1. 50
    2. 100
    3. 25
    4. 120
42. How many Moons can fit across the diameter of the Sun?
    1. 100
    2. 200
    3. 300
    4. 400
    5. None of the above

1. How many Moons can fit between Earth and the Moon?
   1. 30
   2. 60
   3. 90
   4. 120
2. How many Moon orbits fit between the Sun and Earth?
   1. 2
   2. 30
   3. 110
   4. 220
3. The distance between the Moon and Earth is equal to
   1. one-half the diameter of the Sun.
   2. 120 x the Moon’s diameter.
   3. 110 x the Earth’s diameter.
   4. one-half the distance between Earth and the Sun.
4. Pluto’s diameter is about 2300 km, which is about 1/3 of the Moon’s diameter. How many Plutos could you fit across the Earth?
   1. 1.33
   2. 4
   3. 12
   4. 30
5. If you were building a scale model of the solar system, and had a ball for the Sun that was 220 inches in diameter, what would you need the diameter of your “Moon” ball to be?
   1. ¼ of an inch
   2. ½ of an inch
   3. 1 inch
   4. 2 inches
6. Planet Devil Duck is 5 times the size of Earth. How many Moons can fit across the diameter of Planet Devil Duck?
   1. 5
   2. 10
   3. 20
   4. 40
7. Star Devil Duck is 3 times the size of the Sun. How many Moon orbits can fit across the diameter of Star Devil Duck?
   1. 3
   2. 6
   3. 9
   4. 12
8. Planet Plutonium’s diameter is twice the diameter of the Moon. How many Planet Plutoniums could you fit between the Earth and the Sun?
   1. 220
   2. 24,200
   3. 880
   4. 96,800
   5. None of the above