Astronomy Review

*Use the following four pictures to answer questions 1-4.*

1. Put an X through the pictures that are NOT possible.
2. Circle the picture that could be a lunar eclipse.
3. Triangle the picture that could be a solar eclipse.
4. Why does a solar or lunar eclipse NOT happen every month?

*Use the picture below to answer questions 5-7.*

5. Why does the shadow change its length?

6. Draw in the shadow for 11 am.
7. Draw the shadow for 2 pm.

*Use the following picture to answer questions 8-12.*

8. Which location is the satellite traveling the fastest?

9. Why is the satellite moving fastest there?

10. If the planet was the Earth, name that satellite.

11. How long will it take that satellite to revolve around the Earth?

12. Name the shape the satellite makes around the planet.
13. What is the eccentricity of the following ellipse? *(Round to the thousandths)*

Formula

Substitute

Solve

14. How does the eccentricity of this diagram compare to all of the planets in our solar system.

15. Which position is the summer season in the northern hemisphere?
16. Shade the night portion of position B and position D in the diagram.
17. Describe what happens to the orbital velocity as the planet moves from C to A.
18. Which latitude receives the direct rays of the sun in position D?
19. Which latitude receives the direct rays of the sun in position B?
20. Which latitude receives the direct rays of the sun in positions A and C?
21. Which position gives NY the longest amount of daylight hours?
22. What is the date for position D?
23. Label the position of the new moon with an N.
24. Label the position of the full moon with an F.
25. Label the third quarter moon with a 3.
26. Put a square around the solar eclipse moon picture.
27. Put a triangle around the lunar eclipse moon picture.
28. What happens to the lit portion of the moon we see from position N to position F?

Use the picture to the right to answer questions 29-33.

29. What time is it at point X?
30. What time is it at point Y?
31. What time is it at Z?
32. What two days of the year could this picture have been taken?
33. The motion in this diagram causes wind and ocean currents to curve. What is the name of that force and which way do they curve in the Northern Hemisphere?
34. Which city in NYS is this location probably located?

35. What are the two possible dates this picture could be on?

36. Draw the sun’s path on June 21\textsuperscript{st} reaching an altitude of 73°.

37. Label the zenith point.

38. What happens to the altitude of Polaris as you travel from New York to the North Pole?

39. What causes the tides to rise and fall on a daily basis?

40. What time and day should the next LOW tide occur?

41. What should the Ocean Tide Water level be on the next HIGH tide?
42. What is the date of this picture?

43. What letter is receiving the direct rays of the sun on this date?

44. Which letter could be in New York State?

45. How many hours of sunlight does the South Pole receive on this date?

46. What happens to the amount of daylight hours as you travel from point C to point A?

47. Name at least two things wrong with this picture.

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48. Describe the star cycle of a star like the Earth’s sun?

49. What do stars like the Earth’s Sun originate from?

50. What could happen to a massive star?

51. How can you determine from the graph that the Earth is farthest away during our summer?

52. What is happening in this picture?
Use the following diagram to answer questions 53-56.

53. What is the date of this diagram?
54. Which number represents the time of day with the shortest shadow?
55. Which number represents the time of day with the longest shadow?
56. If this location was in New York State, label the approximate position of Polaris.

Use the following picture to answer questions 57-60.

57. Which location could be in New York? _______ because..
58. Which location is in the Southern hemisphere? _______ because..
59. Which location is at the North Pole? _______ because..
60. Which location is at the Equator? _______ because..
61. Label the moon phases in the diagram.

62. What time is it at location B?

63. What is location A experiencing?

64. What phase of the moon is shown in the diagram?

65. What is the relationship between sunspots and magnetic activity?

66. Describe this graph.