

Name _____

Date _____

**Earth Science Review Sheet - Exam IV
The Earth, Moon, and Sun**

**THIS REVIEW SHEET IS DUE ON WEDNESDAY, NOVEMBER 4th
EXAM DATE - FRIDAY, NOVEMBER 5th**

Section I - Earth in Space (Pages 660-661)

1) What is astronomy? _____

2) If you look up at the sky it appear the Sun, Moon, and stars move across the sky. In reality, what is occurring? _____

3) Earth moves through space in two major ways which are: _____

4) Earth rotates on an imaginary line that runs from the _____

_____ to the _____. This is

called Earth's _____.

5) Earth _____ on its axis every 24 hours. This is called

a _____.

6) Earth rotates from _____ to _____ causing the

sun to rise in the _____ and set in the _____.

7) Earth _____ around the Sun every 365.25 days.

This is called a _____.

8) How do we account for the .25 extra days? _____

9) List the four seasons and the months associated with each:

Season: _____ Months: _____

Season: _____ Months: _____

Season: _____ Months: _____

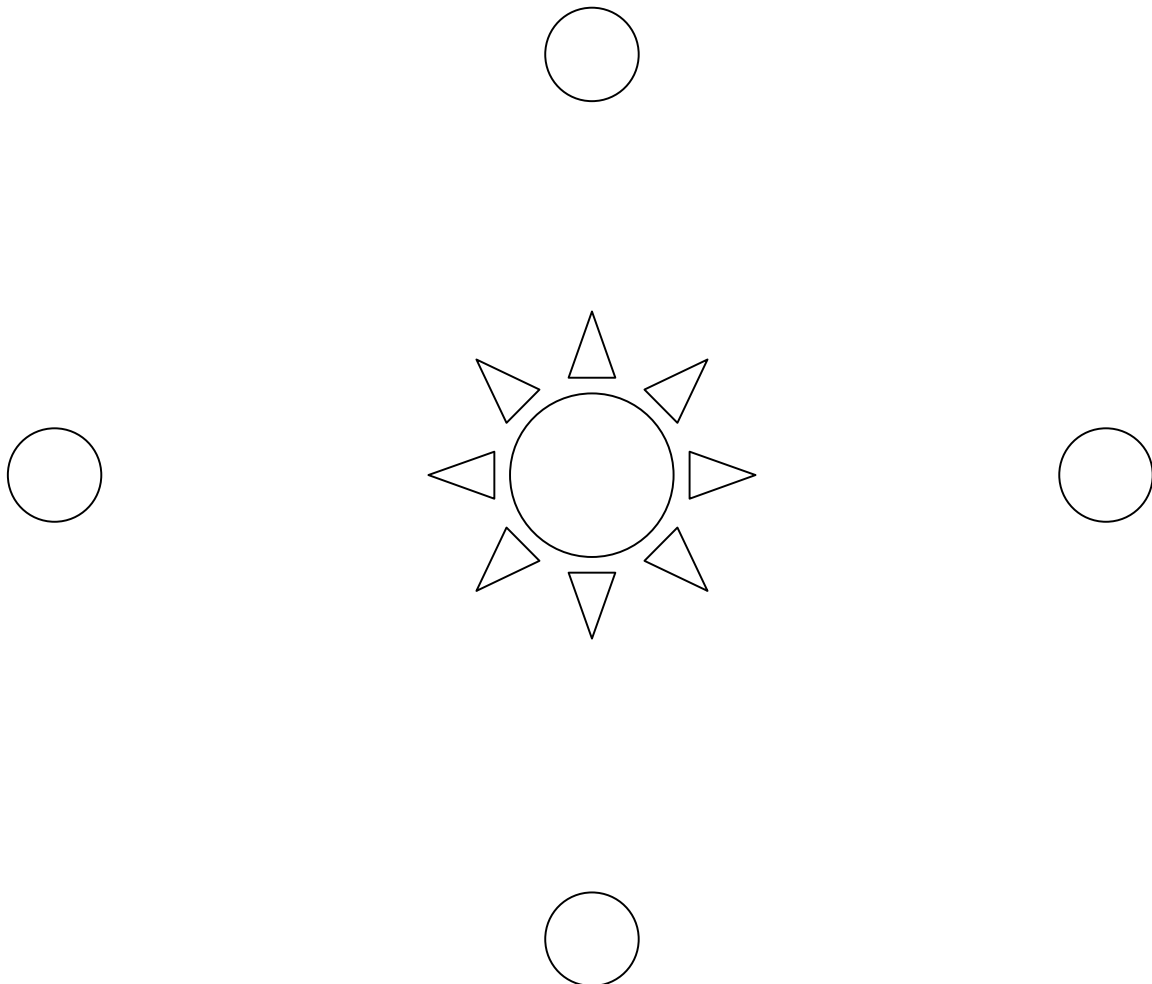
Season: _____ Months: _____

10) Why is it generally cold at the poles and warm at the equator? _____

11) What causes the seasons (2 things)? _____

12) At what angle is Earth tilted? _____

13) As we did in class, please indicate the seasons in each depiction of Earth in BOTH hemispheres. *ALSO*, include the solstices and equinoxes.



Section II - Gravity and Motion (Pages 666-669)

1) Who realized that there must be a force acting on the Earth and Moon to keep them in orbit? _____

2) A _____ is a push or pull.

3) What is gravity? _____

4) What does the *universal law of gravitation* say? _____

5) Gravitational attraction depends on two (2) things. What are they?

6) The amount of matter in an object is called _____

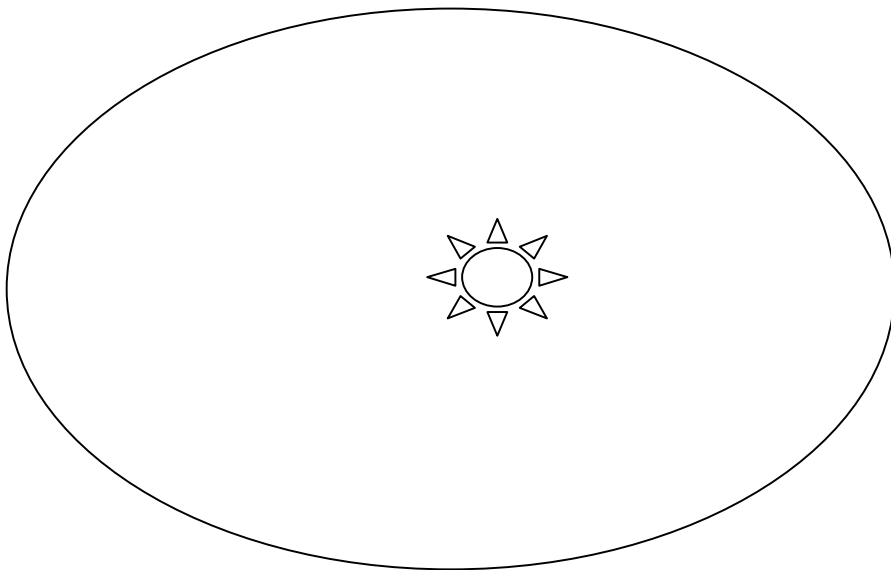
7) _____ is the force of gravity on an object.

8) If you were to go to the moon or another planet what would change, weight or mass? _____ Why? _____

9) Newton's first law of motion (regarding *inertia*) states that _____

10) Why do Earth and the other planets simply not go flying off into space or crashing into the sun? _____

11) In the space provided below, indicate how gravity and inertia affect an orbiting body.



Section III - Phases, Eclipses, and Tides (Pages 670-677)

1) What causes the tides, phases of the moon, and eclipses? _____

2) How is it that the same side of the moon always faces Earth? _____

3) The moon does not produce its own light. How is it possible that we see the moon? _____

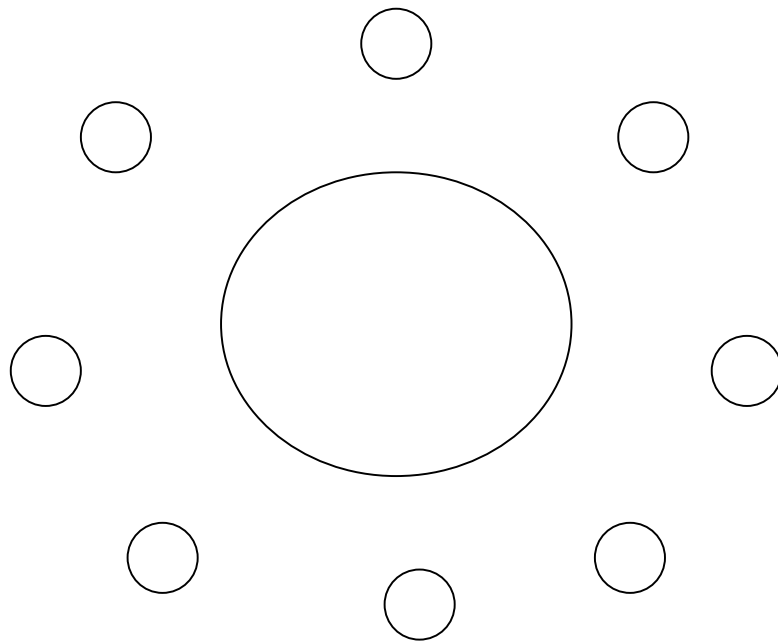
4) The different shapes of the moon we see from Earth are called

_____. What are they caused by? _____

5) How long does it take for the moon to make one complete revolution

around Earth? _____

6) Look at the illustration below. Please indicate the phase of the moon in each situation.



7) Why is it that the Moon doesn't move into Earth's shadow as it revolves around Earth? _____

8) When does an "eclipse" occur? _____

9) What are the two (2) types of eclipses? _____

10) When does a solar eclipse occur? _____

11) As the moon is so small compared to the sun, it casts a very small shadow on Earth. The smallest part of this shadow is called the _____

and the larger part of the shadow is called the _____.

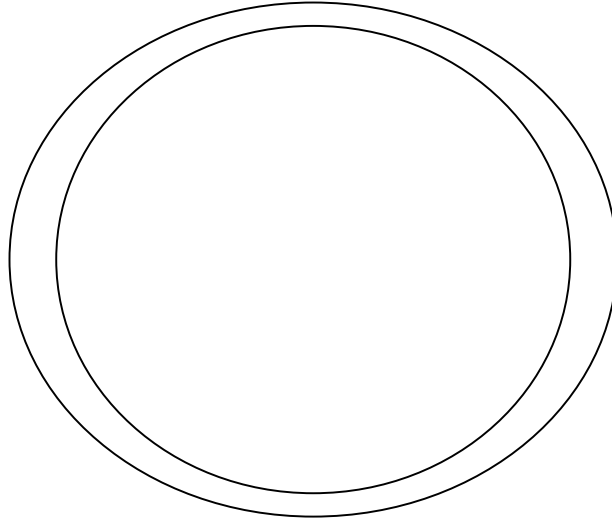
12) When does a lunar eclipse occur? _____

13) How is it that a lunar eclipse can be seen anywhere from Earth? _____

14) _____ are the rise and fall of ocean water every 12.5 hours.

15) What are tides caused by? _____

16) On the illustration below, please indicate where high and low tide would be.



For questions please refer to the illustration above

17) Why is it there are two (2) locations on Earth that experience high tides? _____

Where do the low tides occur? _____

18) What is a spring tide and how is it produced? Neap tide? _____

Section IV - Traveling Into Space (Pages 684-685)

1) A _____ is a device that expels gas in one direction to move in the opposite direction.

2) A rocket moves forward when _____

3) How is fuel converted to gas and used as propulsion? _____

4) What does Newton's 3rd law of motion state? _____

5) Using the words *thrust* and *velocity*, explain how a rocket moves forward.

6) _____ is the velocity needed for an object to stay in orbit around Earth. If the object slows down in space, what will happen to it? _____

7) What is escape velocity? _____

8) How fast is escape velocity in km/hr and mph?

Km/hr _____

Mph _____