

## Eclipses and Tides Homework

Multiple Choice -

- 1) During one 24 hour period, every point on Earth will experience \_\_\_\_\_  
a. one high tide      b. four tides      c. four low tides      d. one low tide
- 2) You can see a lunar eclipse if you look into the sky during \_\_\_\_\_  
a. a new moon      b. crescent moon      c. the day      d. the night
- 3) The area in a shadow in which all light is cut off is called the \_\_\_\_\_  
a. penumbra      b. umbra      c. postumbra      d. true shadow
- 4) When the moon is in Earth's shadow, a \_\_\_\_\_ occurs.  
a. solar eclipse      b. new moon      c. full moon      d. lunar eclipse

Diagrams -

A. Use Figure 5-2 to answer Questions 1-4

- 1) What kind of eclipse is shown in Figure 5-2? \_\_\_\_\_
- 2) During what moon phase can this type of eclipse occur? \_\_\_\_\_
- 3) Label the umbra and penumbra on the Figure.

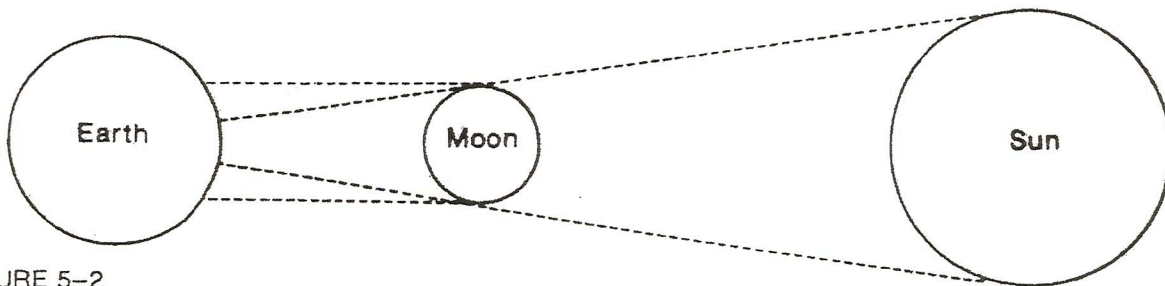


FIGURE 5-2.

- 4) Why don't we have a solar eclipse during every new moon phase?

3. Draw a diagram of the Earth, moon, and sun for a lunar eclipse. Label the umbra and the penumbra

Answer the following questions based on your diagram

- 1) What is the phase of the moon during a lunar eclipse? \_\_\_\_\_
- 2) Why does a lunar eclipse last much longer than a solar eclipse?

2. Draw a diagram of the Earth and moon which shows how the tides occur.

- 1) How many high tides occur every 24 hours? \_\_\_\_\_
- 2) How many hours are there between high tide and low tide? \_\_\_\_\_

3) If the Earth, moon and sun all lined up (see figure 5-2), how do you think that would affect the tides?

# Eclipses and Tides Homework

Key

## Multiple Choice -

- 1) During one 24 hour period, every point on Earth will experience \_\_\_\_\_  
a. one high tide    **b. four tides**    c. four low tides    d. one low tide
- 2) You can see a lunar eclipse if you look into the sky during \_\_\_\_\_  
a. a new moon    b. crescent moon    c. the day    **d. the night**
- 3) The area in a shadow in which all light is cut off is called the \_\_\_\_\_  
a. penumbra    **b. umbra**    c. postumbra    d. true shadow
- 4) When the moon is in Earth's shadow, a \_\_\_\_\_ occurs.  
a. solar eclipse    b. new moon    c. full moon    **d. lunar eclipse**

## Diagrams -

A. Use Figure 5-2 to answer Questions 1-4

- 1) What kind of eclipse is shown in Figure 5-2? Solar
- 2) During what moon phase can this type of eclipse occur? New
- 3) Label the umbra and penumbra on the Figure.

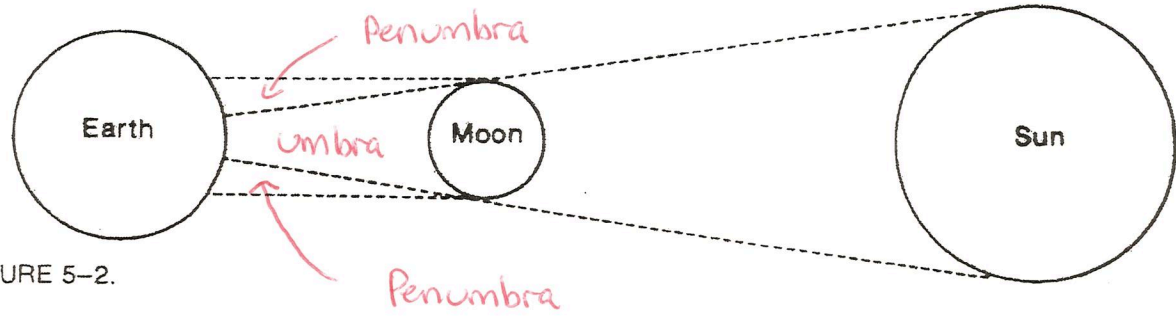


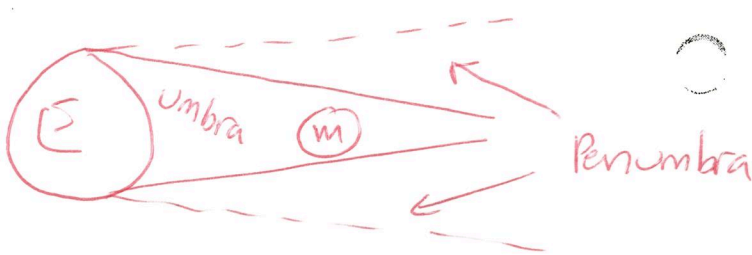
FIGURE 5-2.

4) Why don't we have a solar eclipse during every new moon phase?

Moon's orbit is tilted 5°

1. Draw a diagram of the Earth, moon, and sun for a lunar eclipse. Label the umbra and the penumbra

Sun)

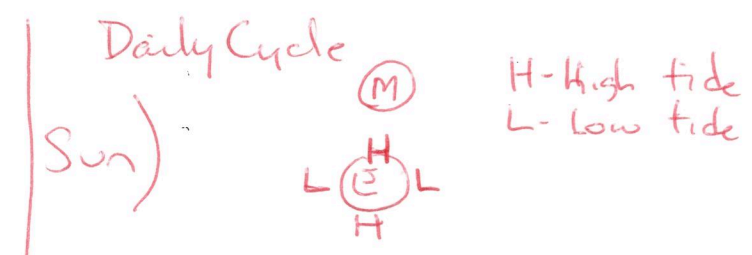
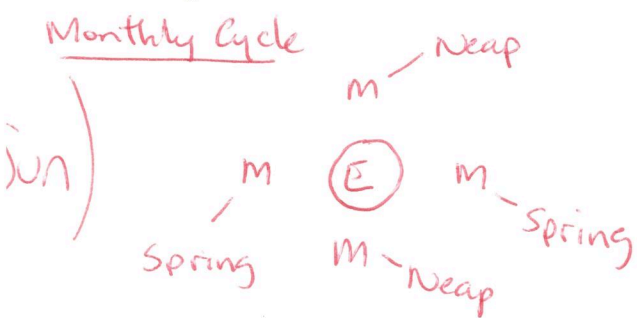


answer the following questions based on your diagram

- 1) What is the phase of the moon during a lunar eclipse? full
- 2) Why does a lunar eclipse last much longer than a solar eclipse?

Earth's Shadow is much larger than the Moon's Shadow

2. Draw a diagram of the Earth and moon which shows how the tides occur.



- 1) How many high tides occur every 24 hours? ~ 2
- 2) How many hours are there between high tide and low tide? 6 hrs 13 min.

3) If the Earth, moon and sun all lined up (see figure 5-2), how do you think that would affect the tides?

You would have the highest high tides of the Month (Spring tides)