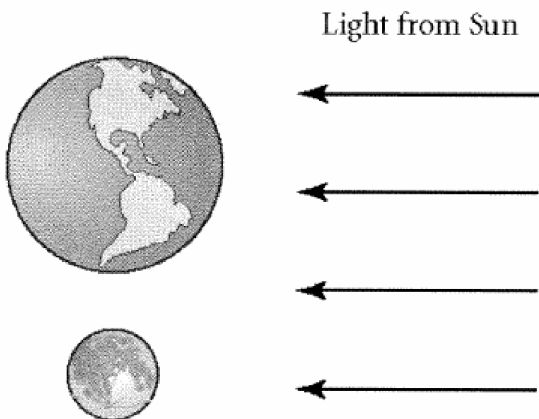


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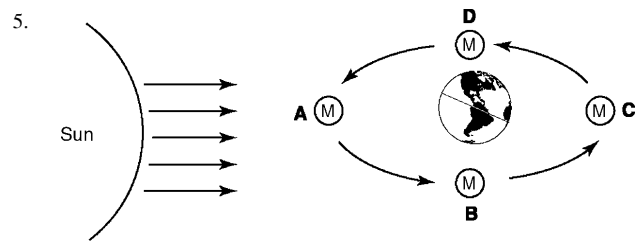
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- The length of daylight changes as the seasons change during the year. What causes these changes in daylight?
  - Earth's tilt on its axis
  - the Sun's tilt on its axis
  - Earth spinning on its axis
  - the Sun spinning on its axis
- Which statement *correctly* describes why there are fewer than 24 hours of daylight in Alaska during each day in April?
  - Earth's rotation slows during the day.
  - Earth's rotation slows during the night.
  - Earth's rotation causes both day and night.
  - Earth's tilt on its axis causes both day and night.
- Which location on Earth receives the most direct sunlight?
  - the deserts
  - the South Pole
  - the equator
  - the Western Hemisphere
- Study the diagram below.



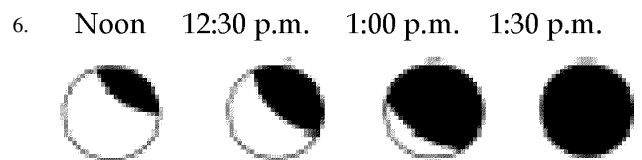
Which of these identifies what someone on Earth could see when the Earth and Moon are in the positions shown in the drawing?

- a solar eclipse
- a lunar eclipse
- a quarter moon
- a full moon

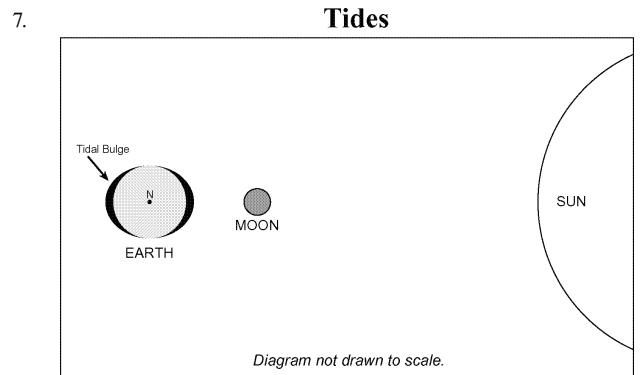
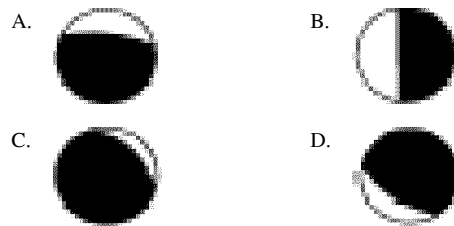


What positions of the moon (M) will create the greater tidal range?

- A or B
- A or C
- B or D
- B or C



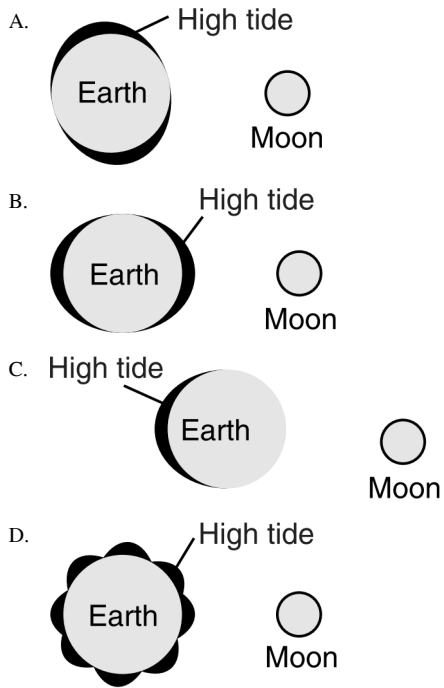
Four stages in the progression of a solar eclipse are shown above. How would the eclipse most likely look at 2:00 pm?



Why does the moon have a greater effect on the tides than the sun?

- The moon is larger than the sun.
- The moon is solid while the sun is gaseous.
- The moon rotates more quickly than the sun.
- The moon is closer than the sun to the Earth.

8. Which diagram most accurately represents the effect of the gravitational pull of the Moon on Earth's ocean tides?



9. Why is there a full Moon approximately once a month?

- A. The Moon revolves around the Earth once a month.
- B. The Moon rotates on its axis once a month.
- C. The Moon revolves around the Sun once a month.
- D. The Moon does not rotate on its axis.

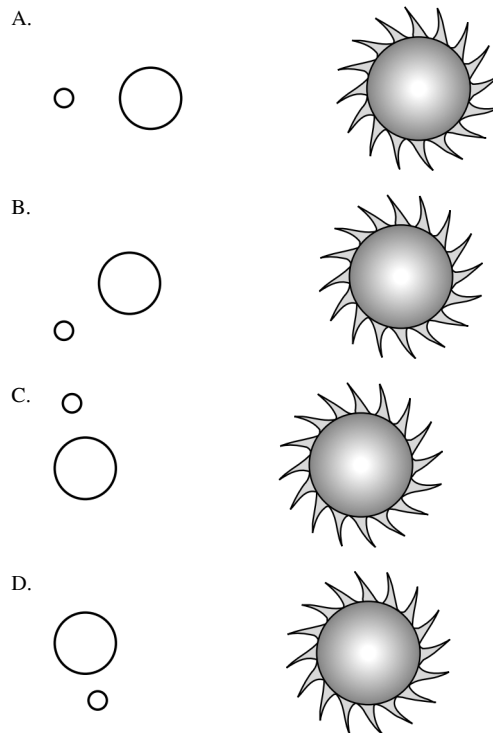
10. Which of these is caused by the rotation of Earth?

- A. Tides
- B. Days and nights
- C. Spring and fall
- D. Rainfall

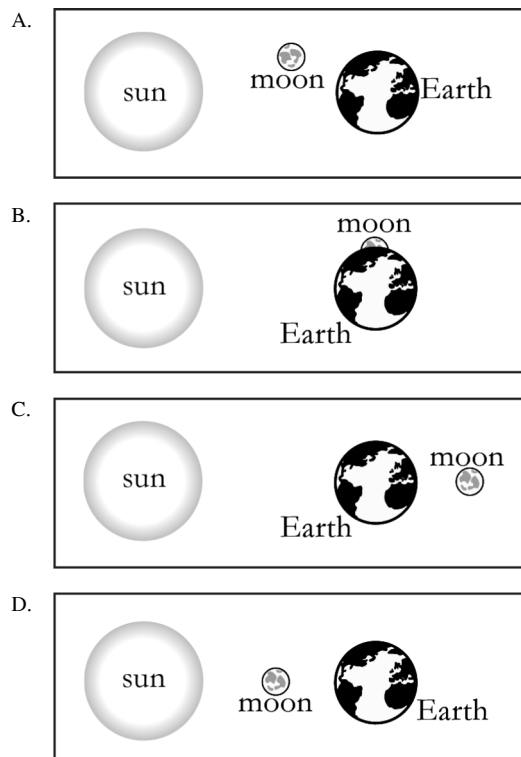
11. Which of these causes summer in the northern hemisphere?

- A. The Sun is closer to Earth during the summer.
- B. The North Pole is tilted away from the Sun during the summer.
- C. The northern hemisphere receives more direct sunlight during the summer.
- D. Earth's northern axis is tilted away from the Sun during the summer.

12. Which diagram below shows the relationship between the sun, the moon, and Earth when the moon is full (seen as a completely lighted circle)?



13. Which diagram shows the Earth-moon-sun system arranged to cause a total solar eclipse?







14. How long does it take Earth to spin around on its axis one time?

- A. a day    B. a week    C. a month    D. a year

15. Which object in the sky is a satellite of the planet Earth?

- A. Sun    B. Moon    C. Mars    D. Saturn

16. A student observed the shape of the Moon once every 7 days during the month of June. Which of the following sets of drawings shows how the Moon's shape could have changed during the month of June?

- A. June 1    June 8    June 15    June 22    June 29  

- B. June 1    June 8    June 15    June 22    June 29  

- C. June 1    June 8    June 15    June 22    June 29  

- D. June 1    June 8    June 15    June 22    June 29  


17. A student observed the Moon on a Tuesday. She drew a picture of its shape in her journal, as shown below.







Approximately how long will the student have to wait before she can see the Moon with this same shape and position again?

- A. 7 days    B. 14 days    C. 28 days    D. 365 days

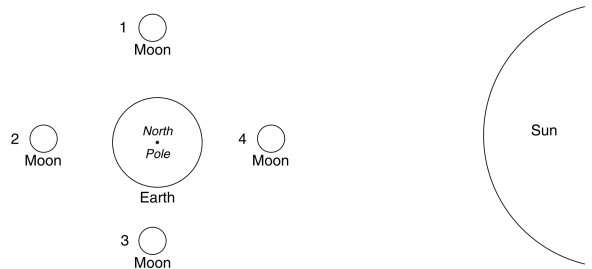
18. A student made the drawing below to show the order of several phases of the Moon. One of the phases is missing.



Which of the following pictures shows the phase of the Moon that is missing from the drawing?

- A.     B. 
- C.     D. 

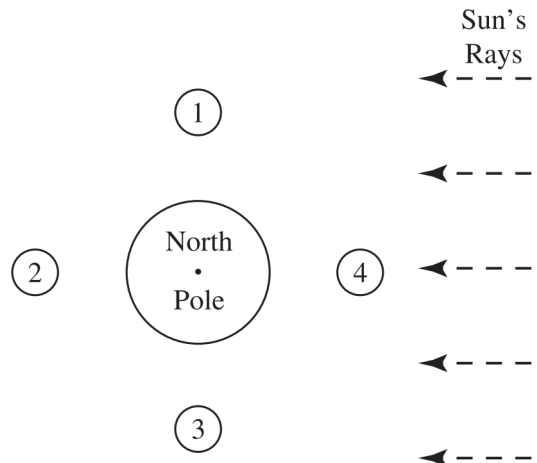
19. The diagram below shows a polar projection of Earth, the Sun, and four positions of the Moon.



Which position of the Moon could cause a solar eclipse?

- A. 1    B. 2    C. 3    D. 4

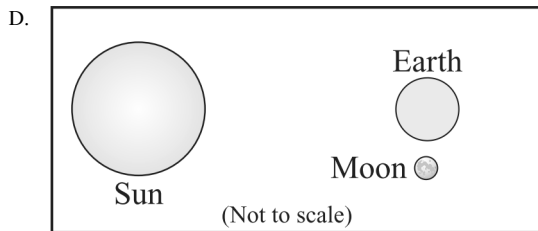
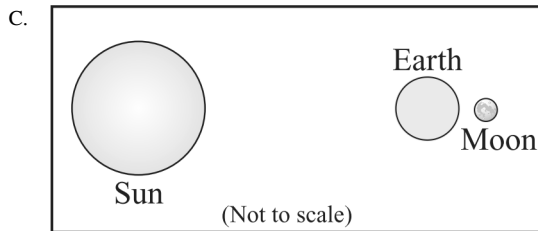
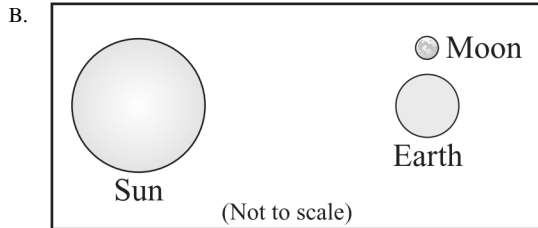
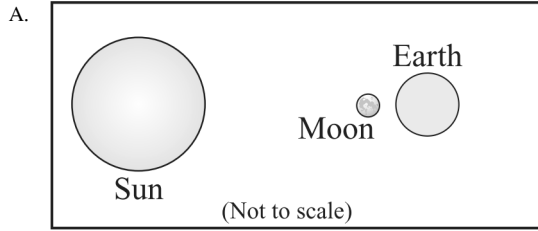
20. The diagram below shows a polar projection of Earth and four positions of the Moon.



The highest high tides and lowest low tides are called spring tides. Which positions of the Moon produce spring tides in Earth's oceans?

- A. 1 and 2    B. 2 and 4    C. 1 and 3    D. 3 and 4

21. Which of the following diagrams *best* shows the relative positions of Earth, the Moon, and the Sun during a lunar eclipse?



22. Which statement *best* describes the orbit of Earth around the sun?

- A. Earth's orbit is elliptical.
- B. Earth's orbit is irregularly-shaped.
- C. Earth's orbit takes about 30 days to complete.
- D. Earth's orbit takes about 24 hours to complete.

23. Along the coast of Maine, how often do the tides rise and fall?

- A. twice each day
- B. twice each week
- C. twice each month
- D. twice each year

24. The Moon causes which of the following on Earth?

- A. exploding volcanoes
- B. high and low tides
- C. changing weather patterns
- D. high and low temperatures

25. Which sentence explains why we see the phases of the Moon?

- A. The Moon is a large planet.
- B. The Moon revolves around Earth.
- C. The Moon is covered with many craters.
- D. The Moon revolves around the Sun.