

(1) In what direction does the earth's gravity pull things? *(Select the best answer.)*

(A) toward the earth's surface

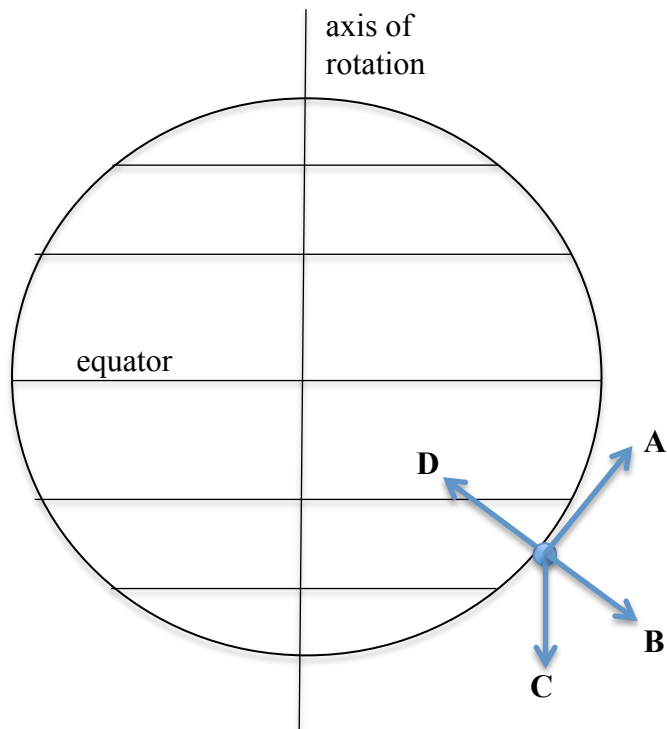
(B) toward the center of the earth

(C) toward the south

(D) down

(2) In the diagram of the earth below, suppose that you were standing at the location represented by the small blue circle.

At that location, which one of the four labeled directions would be “down”?



(A) **A**

(B) **B**

(C) **C**

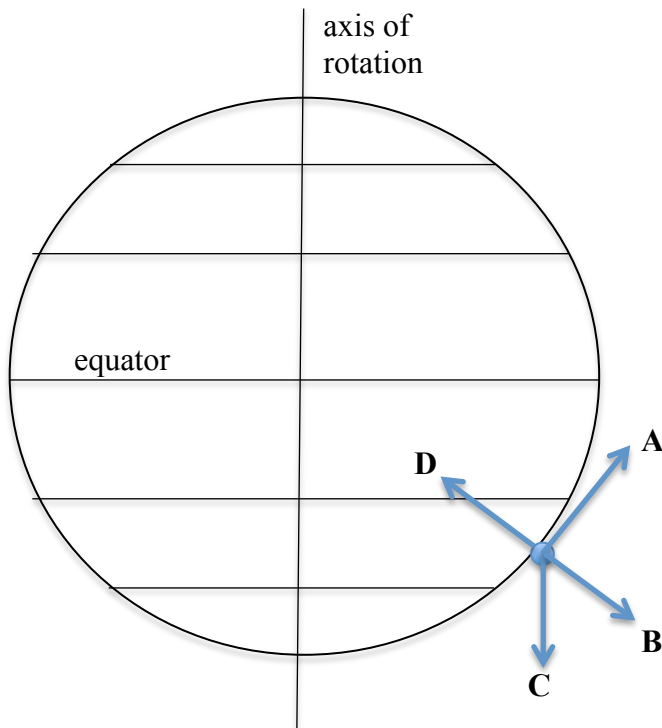
(D) **D**

(3) In what direction is the horizon?

(Select the best answer.)

- (A) toward the earth's surface
- (B) parallel to the earth's surface
(perpendicular to down)
- (C) perpendicular to the earth's surface
(parallel to down)
- (D) toward the south

(4) At the same location as in Question (1), which one of the four labeled directions would be a *horizontal* direction (that is, toward a point on the horizon)?



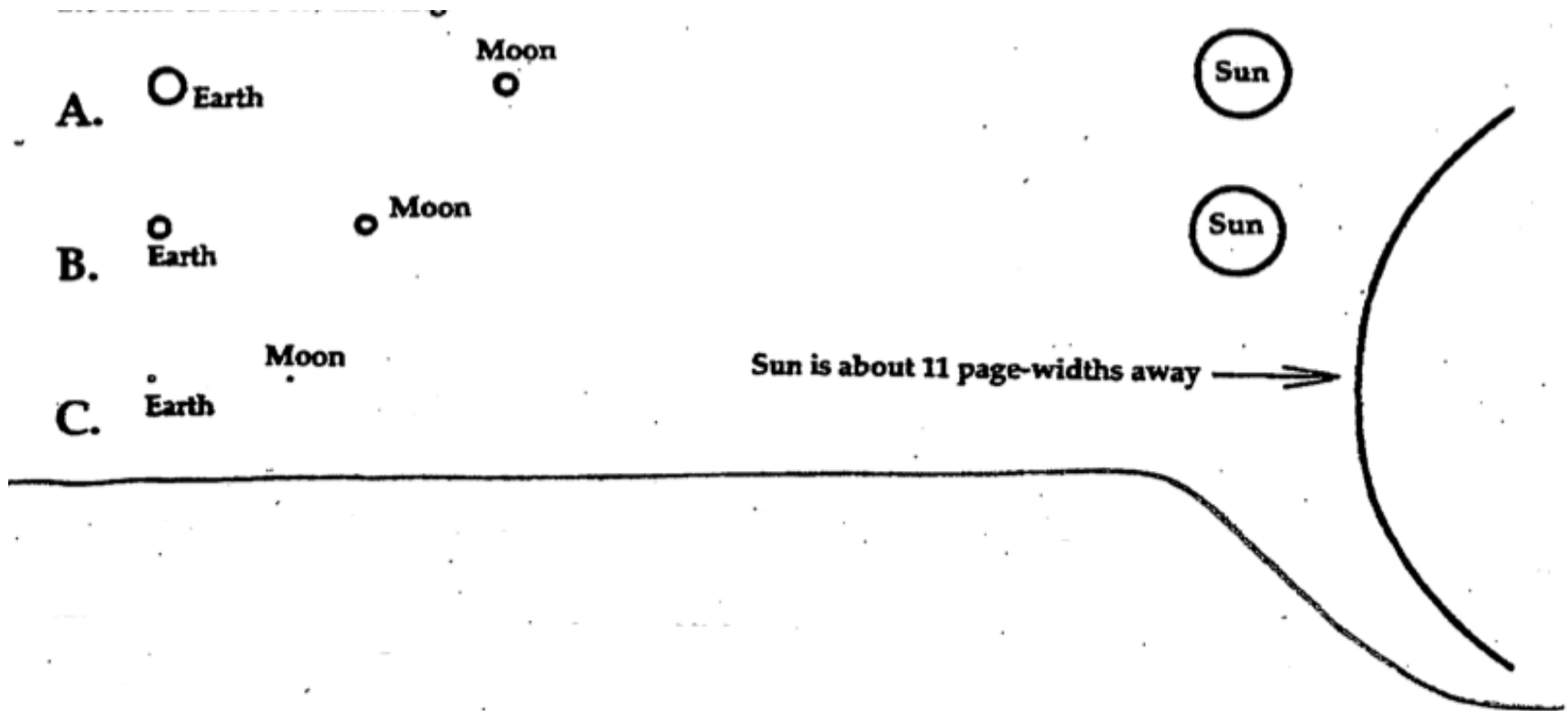
(A) **A**

(B) **B**

(C) **C**

(D) **D**

Which of these three drawings do you think most accurately shows the correct sizes and distances between the Earth, the sun, and the moon?



(5) If the earth and sun (and the distance between them) are drawn to scale on the board 15 ft. apart, what should the diameter of each be?

(A) Earth: 0.0015", Sun: 0.15"

(B) Earth: 0.015", Sun: 1.5"

(C) Earth: 0.15", Sun: 15"

(D) Earth: 1.5", Sun: 150"

(E) Smaller than any of these choices

(6) When you shine a flashlight on a surface, what happens to the intensity of the light on that surface when you reduce (lower) the angle between the light beam and the surface?

(A) The intensity increases.

(B) The intensity decreases.

(C) The intensity doesn't change.