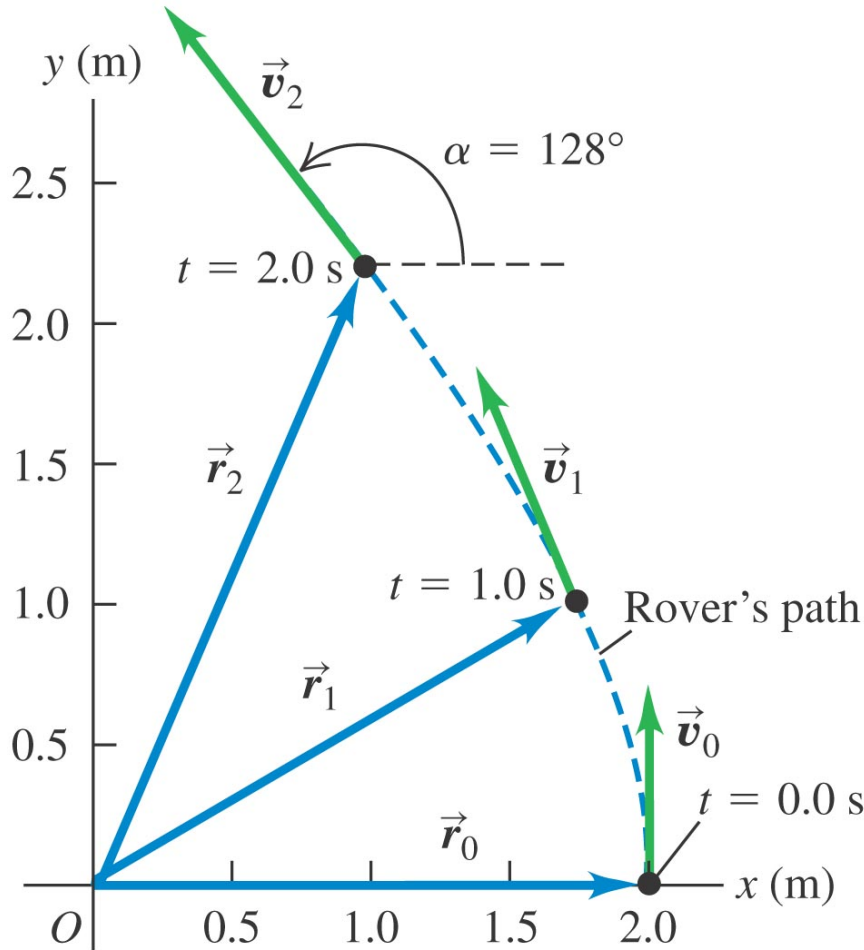# Q3.2

This illustration shows the path of a robotic vehicle, or rover. What is the direction of the rover's average acceleration vector for the time interval from $t = 0.0$ s to $t = 2.0$ s?

A. up and to the left

B. up and to the right

C. down and to the left

D. down and to the right

E. none of the above

The motion diagram shows an object moving along a curved path at constant speed. At which of the points A, C, and E does the object have *zero* acceleration?
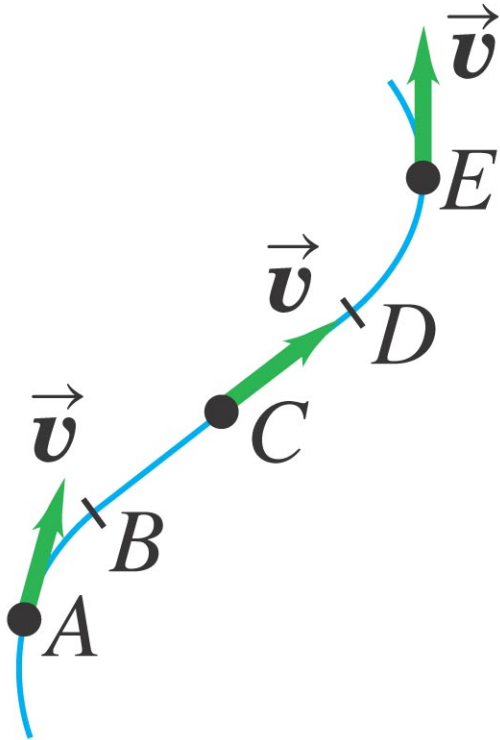
A. point A only

B. point C only

C. point E only

D. points A and C only

E. points A, C, and E

4-12: An object is moving along a circular path and is <u>slowing down</u>, as shown. When at point x, the object's acceleration vector is best represented by which arrow?
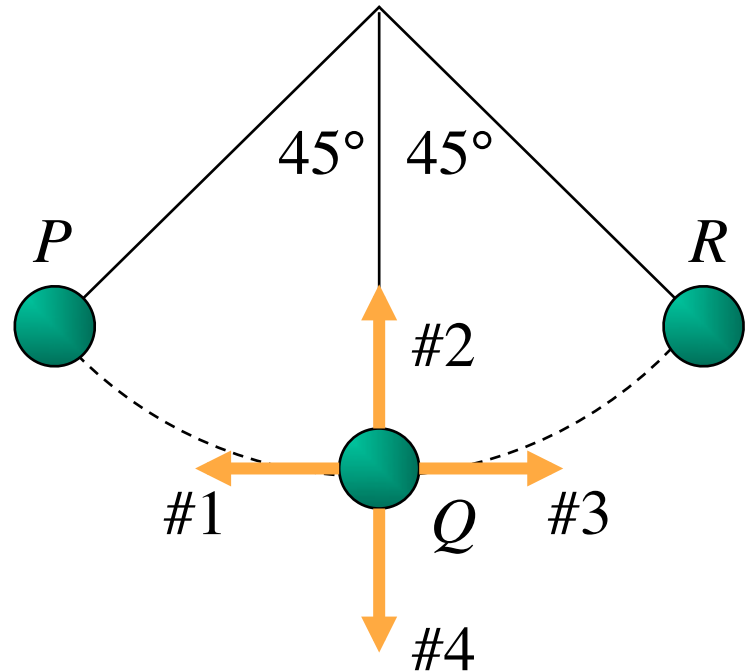

A

B ←———→ D

C
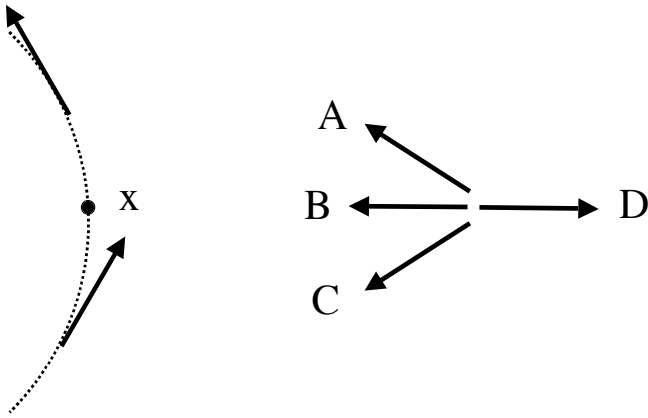
E: None of these

Q3.5

A pendulum swings back and forth, reaching a maximum angle of 45° from the vertical. Which arrow shows the direction of the pendulum bob's acceleration as it moves from left to right through point Q (the low point of the motion)?

A. #1 (to the left)

B. #2 (straight up)

C. #3 (to the right)

D. #4 (straight down)

E. misleading question — the acceleration is zero at Q

Q3.6

A pendulum swings back and forth, reaching a maximum angle of 45° from the vertical. Which arrow shows the direction of the pendulum bob's acceleration at P (the far left point of the motion)?

A. #1 (up and to the left)

B. #2 (up and to the right)

C. #3 (down and to the right)

D. #4 (straight down)

E. #5 (down and to the left)