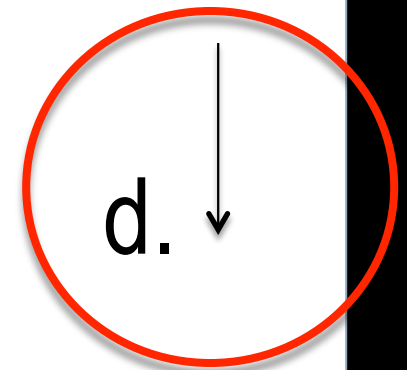
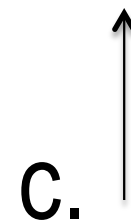
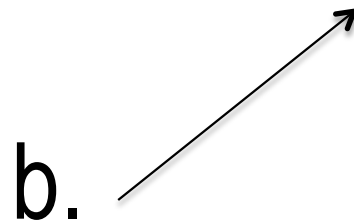
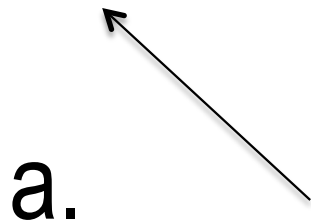
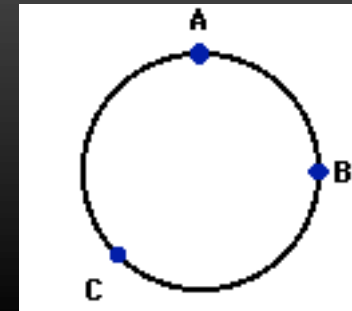


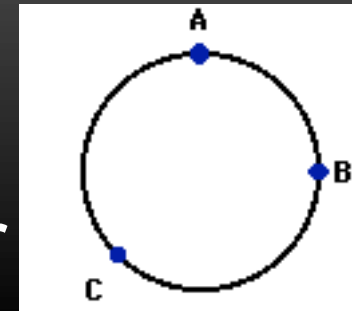
Rex and Doris are on a date. Rex makes a rapid right-hand turn. Doris slides across the vinyl seat and collides with Rex. To break the awkwardness of the situation, they begin discussing the physics of the motion that was just experienced. Rex says that objects which move in a circle experience an outward force. Thus, as the turn was made, Doris experienced an outward force that pushed her towards Rex. Doris disagrees, saying that objects that move in a circle experience an inward force. Doris says Rex traveled in a circle due to the force of his door pushing him inward; she merely continued in a straight line until she collided with Rex. Who is correct?

**Doris**

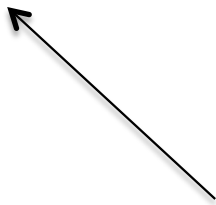
Which vector represents the direction of the velocity vector at point B?



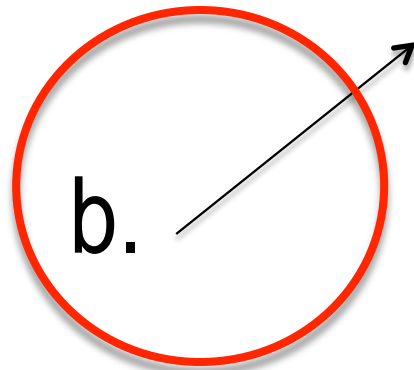
Which vector represents the direction of the acceleration vector at point C?



a.



b.



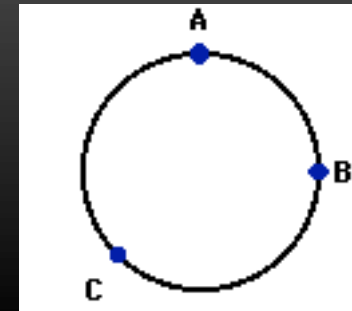
c.



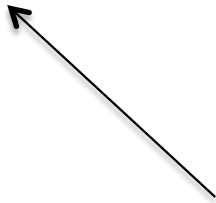
d.



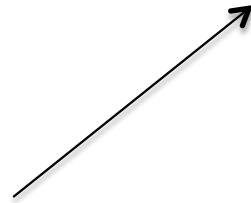
Which vector represents the direction of the force vector at point A?



a.



b.



c.



d.



A jet plane traveling 500 m/s pulls out of a dive into an arc of radius 1500 m. What was the plane's acceleration in "g"?

17.01

$a = (500 \text{ m/s})^2 / 1500 \text{ m}$ , but this is  $a$  in units of  $\text{m/s}^2$ . You want units of  $g$ , so you need to divide this answer by  $9.8 \text{ m/s}^2$ .