A force is necessary to maintain an object in uniform circular motion because
a) The object is accelerating tangential to the circle.
b) It must overcome the drag force
c) The object is accelerating away from the center of the circle
d) Uniform motion always implies there is an acceleration
e) The object is accelerating toward the center of the circle

6.5.5. A motorcycle travels at a constant speed around a circular track. Which one of the following statements about this motorcycle is true?

a) The car has a velocity vector that points along the radius of the circle.
b) The car is characterized by constant velocity.
c) The car is characterized by constant acceleration.
d) The velocity of the car is changing.
e) The car has an acceleration vector that is tangent to the circle at all times.

6.5.6. The centripetal force is best explained by which of the following statements?

a) The centripetal force is the force on an object that is directed radially outward from the center of its orbit.
b) The centripetal force is the force on an orbiting object that is directed along a line that is tangent to the circle.
c) The centripetal force is the net force acting on an orbiting object that maintains it in uniform circular motion.
d) The centripetal force is a fundamental force of nature.

6.5.7. The centripetal force that holds a car moving at constant speed around a flat curve without sliding is

a) the static friction force from the tires
b) the horizontal component of the normal force
c) the kinetic friction force from the tires
d) the horizontal component of the car's weight
e) the reaction force to the car's weight

6.5.7. Which one of the following forces holds a car on a frictionless banked curve?

a) the horizontal component of the normal force
b) the vertical component of the car's weight
c) the vertical component of the normal force
d) the horizontal component of the car's weight
e) the horizontal component of the friction force