4.7.4. A satellite orbits the Earth in uniform circular motion. What is the direction of centripetal acceleration of the satellite?
   a) The centripetal acceleration is a scalar quantity and it doesn’t have a direction.
   b) The centripetal acceleration vector points radially outward from the Earth.
   c) The centripetal acceleration vector points radially inward toward the Earth.
   d) The centripetal acceleration vector points in the direction of the satellite’s velocity.
   e) The centripetal acceleration vector points in the direction opposite that of the satellite’s velocity.

4.7.3. A bicycle racer is traveling at constant speed $v$ around a circular track. The centripetal acceleration of the bicycle is $a$. What happens to the centripetal acceleration of the bicycle if the speed is doubled to $2v$?
   a) The centripetal acceleration increases to $4a$.
   b) The centripetal acceleration decreases to $0.25a$.
   c) The centripetal acceleration increases to $2a$.
   d) The centripetal acceleration decreases to $0.5a$.
   e) The centripetal acceleration does not change.

4.7.9. For an object in uniform circular motion, which of the following statements is false?
   a) The velocity of the object is constant.
   b) The magnitude of the acceleration of the object is constant.
   c) The acceleration is directed radially inward.
   d) The magnitude of the velocity is constant.
   e) The velocity is directed in a direction that is tangent to the circular path.

4.7.7. If an object is moving in uniform circular motion, its period is given by which one of the following quantities?
   a) the speed of the object
   b) the centripetal acceleration of the object
   c) the number of revolutions the object makes each second
   d) the time interval for the object to make one revolution
   e) the displacement of the object

4.8.1. At one point during the Tour de France bicycle race, three racers are riding along a straight, level section of road. The velocity of racer A relative to racer B is $V_{AB} = +6.0 \text{ m/s}$; the velocity of A relative to C is $V_{AC} = +2.0 \text{ m/s}$; what is the velocity of C relative to B, $V_{CB}$?
   a) $+2.0 \text{ m/s}$
   b) $+4.0 \text{ m/s}$
   c) $+8.0 \text{ m/s}$
   d) $-4.0 \text{ m/s}$
   e) $-2.0 \text{ m/s}$