1. A kicker’s extended leg is swung for 0.4 s in a counterclockwise direction while accelerating at 200 deg/s². What is angular velocity of the leg at the instant of contact?
   a. 80 deg/s
   b. 1.8 rad/s
   c. 2.1 rad/s
   d. none of the above

2. The angular velocity of a runner’s thigh changes from 3 rad/s to 2.7 rad/s in 0.5 s. What has been the average angular acceleration of the thigh?
   a. -0.3 rad/s²
   b. -0.6 rad/s²
   c. -1.2 rad/s²
   d. none of the above

3. A tennis racket swung with an approximate angular velocity of 688 °/s strikes a motionless ball at a distance of 0.5 m from the axis of rotation. What is the linear velocity of the racket head at the point of contact with the ball?
   a. 3 m/s
   b. 6 m/s
   c. 9 m/s
   d. 12 m/s

4. The relative angle at the knee changes from 0 degrees to 85 degrees during the knee flexion phase of a squat exercise. If 10 complete squats are performed what is the total angular distance undergone at the knee?
   a. 28.7 radians
   b. 29.7 radians
   c. 30.7 radians
   d. 31.7 radians