HSS 409/537: Kinesiology/Biomechanics
Quiz 7
Name_____

Please circle the correct response(s). There may be 0-4 correct responses for each item.

1. In a vertical leap (not the landing), the following contribute to a greater reaction force on the legs:
    a. Increased body weight (YES, RIGHT FROM THE EQUATION)
    b. Decreased time in the air (NO, DECREASED TIME TO ACHIEVE TAKE-OFF VELOCITY WOULD INCREASE REACTION FORCE)
    c. Increased time to achieve take-off velocity (NO, THIS WOULD REDUCE FORCE)
    d. Increased height of jump (YES, TRANSLATE TO HIGHER INITIAL VELOCITY)

2. In the landing phase of a vertical leap, compared to the take-off
    a. The major muscle groups involved are the same (YES, GLUTES, QUADS, CALVES)
    b. The reaction force tends to be greater (YES, DUE TO THE REDUCED IMPACT TIME TO DECELERATE)
    c. The key muscles involved are moving much more concentrically (NO, ECCENTRICALLY)
    d. The landing velocity is greater than the take-off velocity (NO, MUST BE THE SAME – SINCE TAKE-OFF AND LANDING ARE AT SAME HEIGHT)