Internet Assignment: Sarcomere Contraction

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class: \_\_\_\_\_\_\_\_\_\_\_

<http://highered.mcgraw-hill.com/sites/0072495855/student_view0/chapter10/animation__myofilament_contraction.html>

1. Myofilaments are composed of strings of what 2 proteins?
2. Myofilaments contract due to what?
3. In order for the myosin head to release actin and unflex what must happen

<http://highered.mcgraw-hill.com/sites/0072495855/student_view0/chapter10/animation__sarcomere_contraction.html>

1. When are the H zones and I bands at maximum width?
2. What happens to actin during a contraction?
3. What happens to H bands and I zones in a fully contracted muscle?
4. What affect does contraction have on the A band?

Look at the quiz below, write out the correct answers

1. Muscle contraction is caused by **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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| 1. Which of the following statements about H zones and I bands is TRUE? |

1. During muscle contraction the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
2. In a contracting muscle the Z lines come closer together**. T / F**
3. In a relaxed muscle, the H zone is at its narrowest width **T / F**

Break Down of ATP & Cross-Bridge Movement During Muscle Contraction

<http://highered.mcgraw-hill.com/sites/0072495855/student_view0/chapter10/animation__breakdown_of_atp_and_cross-bridge_movement_during_muscle_contraction.html>

1. What is the role of calcium in muscle contraction?
2. What exactly does a “cross-bridge” refer to
3. When the myosin head moves, what happens to the actin? To the ADP?
   1. .
   2. .
4. What breaks the bond/ cross-bridge between the actin and myosin head?