

Monday Reading Assessment: Unit 4, Forces

Prof. Jordan C. Hanson

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1 Chapter 4 - Forces

1. A rock of mass m is thrown straight up. The net external force on the rock is
 - A: $-mg$ on the way up, 0 at the top, and $-mg$ on the way down.
 - B: $-mg$ on the way up, $-mg$ at the top, and $-mg$ on the way down.
 - C: $+mg$ on the way up, $+mg$ at the top, and $+mg$ on the way down.
 - D: $+mg$ on the way up, 0 at the top, and $+mg$ on the way down.
2. A spring exerts a force $\vec{s} = -k\Delta\vec{x}$. The displacement $\Delta\vec{x}$ is the amount the spring is stretched, and k is a constant with units of Newtons per meter. If a spring with $k = 50.0$ N/m is stretched by 10 cm, what is the force \vec{s} ?
 - A: -500 N
 - B: 500 N
 - C: -5 N
 - D: 5 N

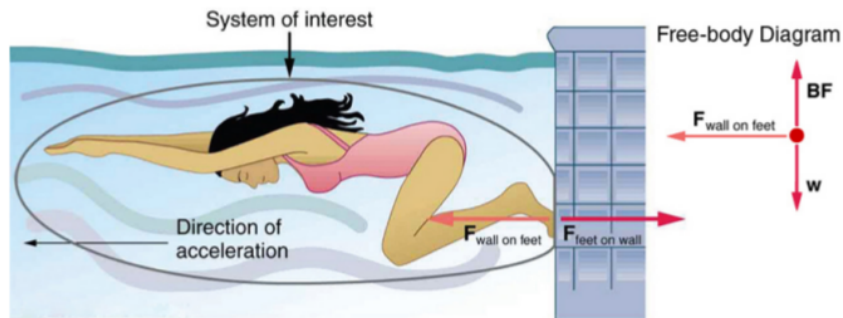


Figure 1: A woman pushes off of a wall underwater in a pool.

3. According to Fig. 1, a woman experiences a force by the wall on herself. Her weight force w is balanced by the buoyant force BF . a) If the wall exerts a force of 100 N, and her mass is 50 kg, what is her acceleration?