

A 1200 kg car and a 2400 kg car are lifted to the same height at a constant speed in an auto service station. Lifting the more massive car requires \_\_\_\_ work  
a. less b. the same c. twice as much d. four times as much

Solution:

$$A = mgh;$$

$$\frac{A_1}{A_2} = \frac{m_1gh}{m_2gh} = \frac{m_1}{m_2} = \frac{2400}{1200} = 2.$$

**Answer: "C" (twice as much)**