

Answer on Question 51951, Physics, Other

Question:

How much work is done when a bucket of mass 1.5kg with 10kg of water in it is pulled up from the bottom of a well 8m deep? Take $g = 9.8 \frac{\text{m}}{\text{s}^2}$

Solution:

By the definition, work done by the bucket of mass 1.5kg with 10kg of water in it if it is pulled up from the bottom of a well 8m deep is:

$$W = (m_{\text{bucket}} + m_{\text{water}})gh = (1.5\text{kg} + 10\text{kg}) \cdot 9.8 \frac{\text{m}}{\text{s}^2} \cdot 8\text{m} = 901.6\text{J}.$$

Answer:

$$W = 901.6\text{J}.$$

<http://www.AssignmentExpert.com/>