

1. Calculate the work done against gravity required to build a hemisphere of radius 3 feet using the method in the text. Assume the brick has density 80 pounds per cubic foot. Express your answer in foot-pounds.
 - (a) What type of question is this? What sub-type (if any)?
 - (b) Can you draw a picture to help you solve this problem?
 - (c) Are there any formulas to help you? If so, what are they?
 - (d) What steps would you take to solve this question? What about a general question of this sub-type?
 - (e) Did you ever *reduce* the original question to a question from a different sub-type? If so, what was it?