

Name:
J#:
Date: 2017 June 26

Exercise Type (Cost):
In-Class (1AP)

Standard: This student is able to...	Mark:
C08: Work. Express the work done in a system as a definite integral.	
1/4	★ reattempt due on:

Find a definite integral equal to the work required to pull up 25 meters of cable if it weighs 100 newtons and is fully extended downward into a hole.

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Exercise Type (Cost):
In-Class (1AP)

Standard: This student is able to...	Mark:
S07: WorkDiff. Use the work differential to express the work done in pumping a tank of liquid as a definite integral.	
1/3	★ reattempt due on:

Assume salt water weighs $10kN/m^3$. Find an expression in terms of y for the work differential dW required to pump a cross-section of water at height y from a pyramid-shaped tank with its tip pointing downwards, with a total height of 4 feet, and with a square lid with side length 8 feet. Then give a definite integral equal to the work required to pump this tank if it filled 3 feet deep with salt water.