Name:	Exercise Type (Cost):
J#:	**In-Class (1AP)**
Date: **2017 June 27**	

Standard: This student is able to...	Mark:
C07: WashShell. Use the washer or cylindrical shell method to express a volume of revolution as a definite integral.	
3/4 ⋆ reattempt due on:	

Find a definite integral equal to the volume of the solid obtained by rotating the triangle with vertices $(1,4),(1,2),(3,2)$ around the x-axis.

Name:	Exercise Type (Cost):
J#:	**In-Class (1AP)**
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Standard: This student is able to...	Mark:
C08: Work. Express the work done in a system as a definite integral.	
2/4 ⋆ reattempt due on:	

Hooke's Law states that the force required to stretch or compress a spring x units from its natural length requires $F(x) = kx$ units of force for some constant k (depending on the spring). Suppose a spring satisfies $k = 7$ and is naturally length 10. Find a definite integral equal to the work required to compress this spring from length 8 to length 5. (Do not solve your integral.)

Name:	Exercise Type (Cost):
J#:	**In-Class (1AP)**
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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.	
2/3 ⋆ 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 cubical tank with side length 5 meters laying flat on the ground to its top. Then give a definite integral equal to the work required to pump this tank if it filled 4 meters deep with salt water.