MA 126-103 — Summer 2017 — Dr. Clontz

Name:	Exercise T	ype (Cost):	
J#:	In-Class	s (1AP)	
Date: 2017 June 26			
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 inte-			
gral. $2/4$ * reat	tempt due on:		

Find a definite integral equal to the volume of the solid obtained by rotating the region bounded by $y = x^2 - 2x + 1$ and y = x - 1 around the axis x = 1.

MA 126-103 — Summer 2017 — Dr. Clontz

Name:	Exercise T	Type (Cost):
J#:	In-Class	s (1AP)
Date: 2017 June 26		
Standard: This student is able to		Mark:
C08: Work. Express the work done in a system as a definite integral.		
1/4 * reat	tempt 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.

MA 126-103 — Summer 2017 — Dr. Clontz

Name:	Exercise T	Type (Cost):
J#:	In-Class	s (1AP)
Date: 2017 June 26		
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 * reat	tempt 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.