

To review, go thru the videos I built for Chapter 5, already. Those type problems are what I'm going to look at to write the test.

I have Section 5.3 to finish and Section 5.4 to do, today.

EMPHASIS in Chapter 5 is going to be the setups and pictures (sketches of problem situations). If I'm really interested in details of integration, I'll hand you the integral.

Make sure you don't evaluate an integral you weren't asked to. Always ask yourself if the 10 minutes you're spending to get one number is worth the time!!!!

Anything from old tests is fair game, especially that stupid one on Test 1, where I got the limit question wrong. Managing Absolute Value of a function is pretty important.

Looking for setups AND PICTURES

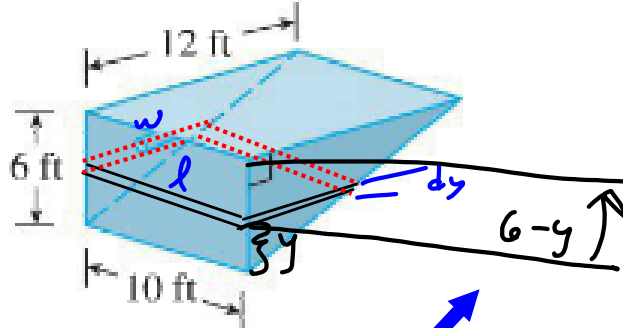
SS.4 #26

23-26 A tank is full of water. Find the work required to pump the water out of the spout. In Exercises 25 and 26 use the fact that water weighs 62.5 lb/ft³.

26.

$$\frac{12}{6} = \frac{w}{y}$$

$$w = 2y$$



$$\int_0^b \text{Area } dy$$

vol.

Vol. dens = Mass
force Density

$$\text{Vol} = l \cdot w \cdot dy$$

$$= 10(2y) dy$$

$$\Rightarrow \text{Force} = (10)(2y dy)(62.5)$$

$$\text{Work} = \text{Force} \cdot \text{Distance} = (20)(62.5) y (6-y) dy$$

$$\text{Total work} = 1250 \int_0^6 y(6-y) dy$$

On ~~Final~~, look for Chain Lift, leaking bucket, and pumping water
Test 5

I want it fairly simple.

For these, you need a representative cross-section of thickness $\Delta x = dx$
($\Delta y = dy$).

I like to pumping water.
Especially metric.