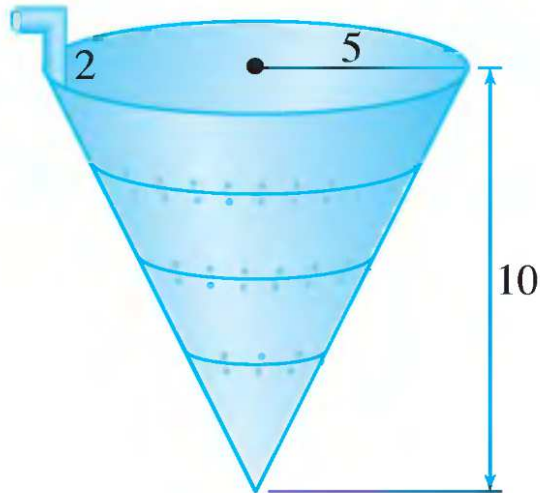


YOUR NAME: _____

George Voutsadakis

Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Calculate the work in Joules required to pump all the water of density ρ in Kg/m^3 out of the conical tank, where the dimensions shown are in meters.



2. Use integration by parts to evaluate the integral $\int x e^{5x} dx$.