Honors Calculus, Math 1451- HW 5 due Tuesday April 5)

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(1) Double integrals in Euclidean coordinates

Questions in 15.2: 10, 12, 14, 20, 24, 26,

Questions in 15.3: 12, 14, 16, 20, 24, 42, 48

(2) Double integrals in polar coordinates

Questions in 15.4: 6, 8, 22, 26, 32, 36

(3) (a) Find the mass of a disc of radius 1 meter if the density of the disc in kg per square meter is given by $p(r, \theta) = 2 - r$ in polar coordinates.

(b) A cylindrical hole or radius 1 bored through the center of a sphere of radius 2. What volume is removed?