

## Question

(5 marks) Evaluate  $\iiint_E \sqrt{x^2 + y^2} dV$ , where  $E$  is the region that lies inside the cylinder  $x^2 + y^2 = 16$  and between the planes  $z = -1$  and  $z = 2$ .

Note: You have to show all steps to earn full marks, including but not limiting to draw a graph, explain how you find the ranges, etc.