Math 201-07 Quiz 3 Term 122

Exercise: Write $I = \int\int\int_E \sqrt{x^2 + z^2} dv$ where E is the region bounded by the paraboloid $y = x^2 + z^2$ and the plane $y = 4$, as an iterated integral. (**Do not evaluate it**)

Exercise: Use cylindrical coordinates to evaluate $I = \int\int\int_E \sqrt{x^2 + y^2} dv$ where E is the region that lies inside the cylinder $x^2 + y^2 = 16$ and between the planes $z = -5$ and $z = 4$.