# Math 2513 – Summer 2024

## Assignment 4

Due: July 10, 2024 – 11:59PM

Q1 (3) – Let . Evaluate



Q2 (3) – Convert the following vectors to spherical coordinates

1. [1,1, -4]
2. [3,-4,1.2]
3. [-2,0,9]

Q3 (3) – Integrate the equation g(x,y,z) = x2 + 4y2 over the cylinder of height 8 and radius 2.

Q4 (1) – what is the volume element in spherical coordinates? What is the volume of a sphere of radius A?