

MATH275-002
Seventh Written Assignment
Due at Class Time
18 October

- (1) Evaluate the iterated integral

$$\int_0^\pi \int_0^{1-\cos(\theta)} r \sin(\theta) dr r\theta$$

- (2) Let S be the region bounded by the circle $x^2 + y^2 = 4$. Evaluate the following double integral

$$\iint_S e^{x^2+y^2} dA$$

- (3) Let S be the first quadrant sector of the circle $x^2 + y^2 = 9$ between $y = 0$ and $y = x$. Evaluate

$$\iint_S \sqrt{9 - x^2 - y^2} dA$$

- (4) Evaluate the iterated integral

$$\int_0^4 \int_{x/2}^2 e^{y^2} dy dx$$

- (5) Write the following iterated integral as an iterated integral with the order of integration reversed.

$$\int_0^2 \int_{y^2}^y f(x, y) dx dy$$