

Present neatly on separate paper. Justify for full credit. No Calculators.

Name _____ Score _____ A (10 minutes)

1) The integral represents the volume of a solid. Describe the solid completely. [2 points]

$$\int_0^{\pi/4} 2\pi(\pi - x)(\cos x - \sin x) dx$$

2) Choose an appropriate method to find the volume of the solid of revolution. After stating the name of the method, find the volume. [8 points]

$$y = 4x - x^2, y = 3; \text{ about } x = 1$$

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Name _____ Score _____ F (10 minutes)

1) The integral represents the volume of a solid. Describe the solid completely. [2 points]

$$2\pi \int_0^2 \frac{y}{1+y^2} dy$$

2) Choose an appropriate method to find the volume of the solid of revolution. After stating the name of the method, find the volume. [8 points]

$$x = y^2 + 1, x = 2; \text{ about } y = -2$$