

Name:

ID #:

Section 24:

Serial #:

1. A solid of *revolution* S has cross sections of area $A(x) = 6 - 4x$, where x ranges from 0 to 1. Find the *volume* of S by *any* method.

2. If the region bounded by $y = 4x$ and $y = 2x^2 - 2x + 4$ is revolved about the x -axis, then set up, but do NOT evaluate, the integral(s) required to compute the *volume* of the generated solid using the method of *cylindrical shells*.

With My Best Wishes

Name:

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Section 6:

Serial #:

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1. Set up, but do NOT evaluate, the integral(s) required to compute the *area* of the region bounded by $y = e^x - 1$ and $y = 2\ln(x + 1)$ on the interval $-0.5 \leq x \leq 2$.

2. Let \mathbf{R} be the shaded region shown in the accompanying graph. If \mathbf{R} is revolved 3 times about the x -axis, set up, but do NOT evaluate, the integral(s) needed to find the volume of the resulting solid.

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Name:

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Section 26:

Serial #:

1. Compute the *area* of the region ***R*** bounded by $y^2 = x + 1$ and $x - 1 = 2 - y^2$.

2. Set up, but do NOT evaluate, the integral(s) needed to find the volume of the solid ***S*** whose base is the region ***R*** described in question 1 above and the cross-sections parallel to the y -axis are squares.

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