

Honors Math 182 Quiz 6 Version A

1. Solve the following antiderivative problems:

(i) $\int \ln(2x + 1) dx$

(ii) $\int \frac{x + 3}{x^3 - 2x^2 + x - 2} dx$

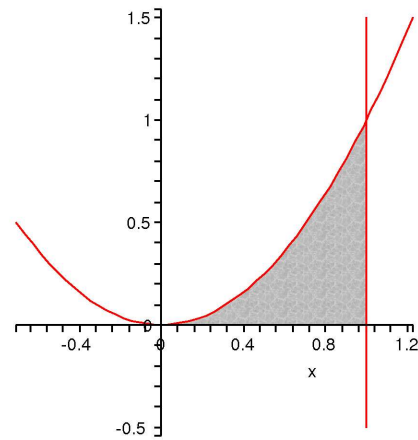
(iii) $\int \sin^3 x dx$

(iv) $\int \arcsin(2x) dx$

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2. The area bounded by the curves $y = x^2$, $y = 0$ and $x = 1$ is depicted below.

(i) Find the volume formed by rotating this area about the x -axis.



(ii) Find the volume formed by rotating this area about the y -axis.