

Math 182 Honors Quiz 10 Version A

Solve the following integration problems.

(i)  $\int \frac{x-1}{x^2+1} dx$

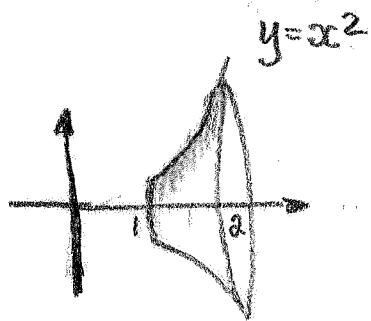
(ii)  $\int \sin \sqrt{x} dx$

(iii)  $\int x^3 e^{2x} dx$

(iv)  $\int (\sin 2x)(\cos 3x) dx$

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1. Find the volume of the solid generated by rotating the region given by  $y = x^2$ ,  $y = 0$ ,  $x = 1$  and  $x = 2$  about the  $x$ -axis.



2. Find the volume of the solid generated by rotating the region given by  $y = 3 + \sin x$ ,  $y = 0$ ,  $x = 0$  and  $x = 2\pi$  about the  $x$ -axis.

