MATH 236 CALCULUS 2
INTEGRATION PROBLEMS

1. $\int \dfrac{1 - \tan x}{1 + \tan x} dx$

2. $\int \dfrac{1}{\sqrt{x^2 - a^2}} dx$, where $a > 0$ is some fixed number.

3. $\int \dfrac{x}{\sqrt{3 - 2x - x^2}} dx$

4. Show that the area enclosed by the ellipse $\dfrac{x^2}{a^2} + \dfrac{y^2}{b^2} = 1$, where $a, b > 0$, is πab.