King **F**ahd **U**niversity for **P**etroleum and **M**inerals
Department of Mathematics & Statistics
Term 131 Math 102 (09) Quiz#5 (8.3)
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Q1. If the substitution $x = 2\sec\theta, \quad 0 \le \theta < \frac{\pi}{2}$ is used to find that $\int f(x)dx = \theta + \tan^2\theta - \sec\theta + \sin 2\theta + C$.

Write the anti-derivative, $\theta + \tan^2\theta - \sec\theta + \sin 2\theta + C$, in terms of x.

Q2. $\int \frac{dx}{x^2\sqrt{x^2-4}}, \; x > 2$