**K**ing **F**ahd **U**niversity for **P**etroleum and **M**inerals
Department of Mathematics & Statistics
Term 142 Math 102 (24) Quiz#1 (5.3, 5.4, 5.5, & 5.6)
Family Name: S.r#

Q1. Find $f(x)$, if $\int_x^1 f(t)\,dt = x^2 - 2x + 1$

Q2. $\int \frac{1}{\sqrt{x}\left(1+\sqrt{x}\right)^2}\,dx$

**K**ing **F**ahd **U**niversity for **P**etroleum and **M**inerals
Department of Mathematics & Statistics
Term 142 Math 102 (7) Quiz#1 (5.3, 5.4, 5.5, & 5.6)
Family Name: S.r#

Q1. Find the **total area** between $f(x) = x^2 - 1$, and the *x-axis* over $[-2,1]$

Q2. $\int \frac{dx}{(\tan^{-1} x)\left(1+x^2\right)}$

**K**ing **F**ahd **U**niversity for **P**etroleum and **M**inerals
Department of Mathematics & Statistics
Term 142 Math 102 (28) Quiz#1 (5.3, 5.4, 5.5, & 5.6)
Family Name: S.r#

Q1. Find $f(0)$, if $\int_1^x f(t)\,dt = x\cos x$

Q2. Evaluate $\int_0^{\sqrt[3]{\pi^2}} \sqrt{x}\cos^2(x^{3/2})\,dx$