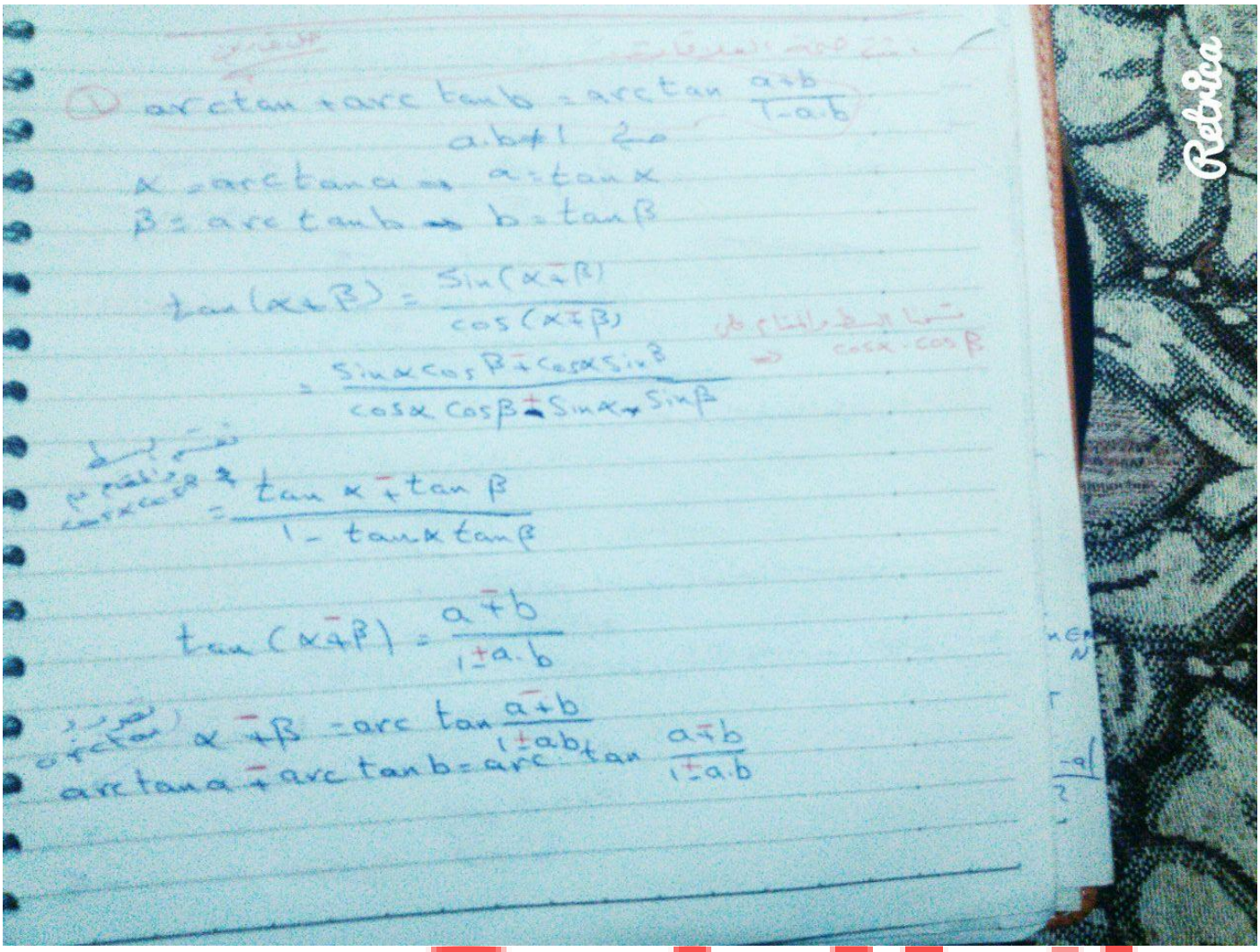
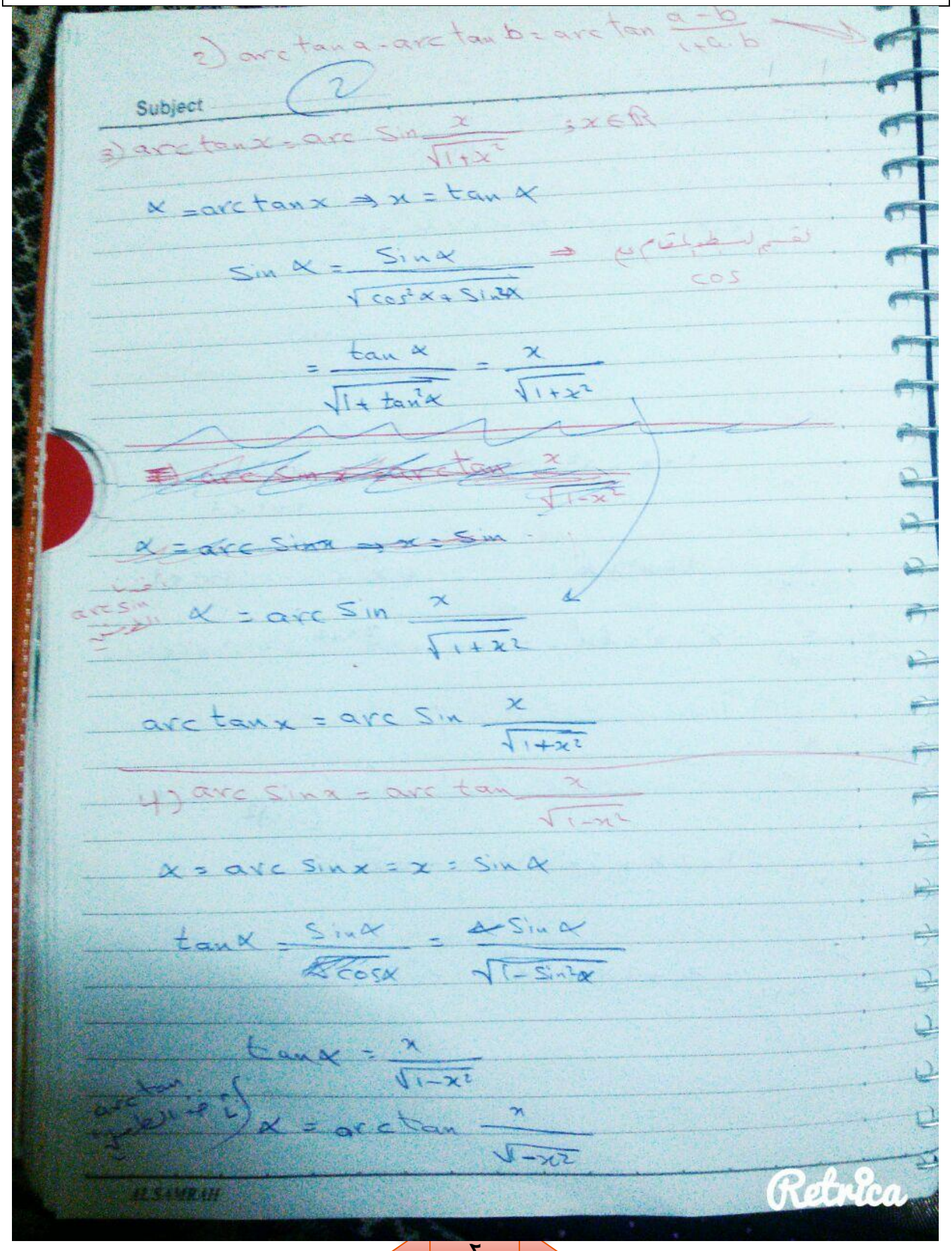
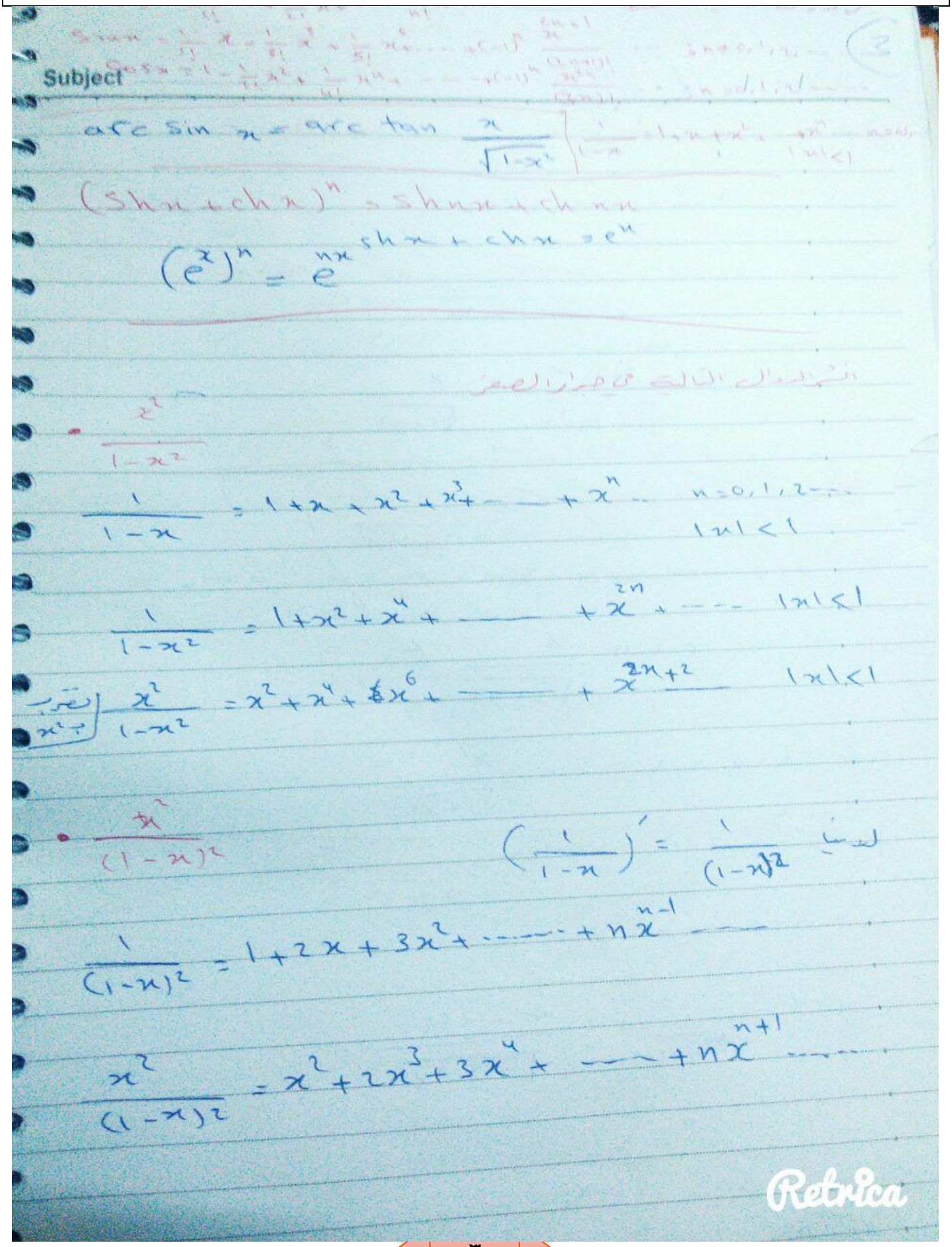
تحليل ا

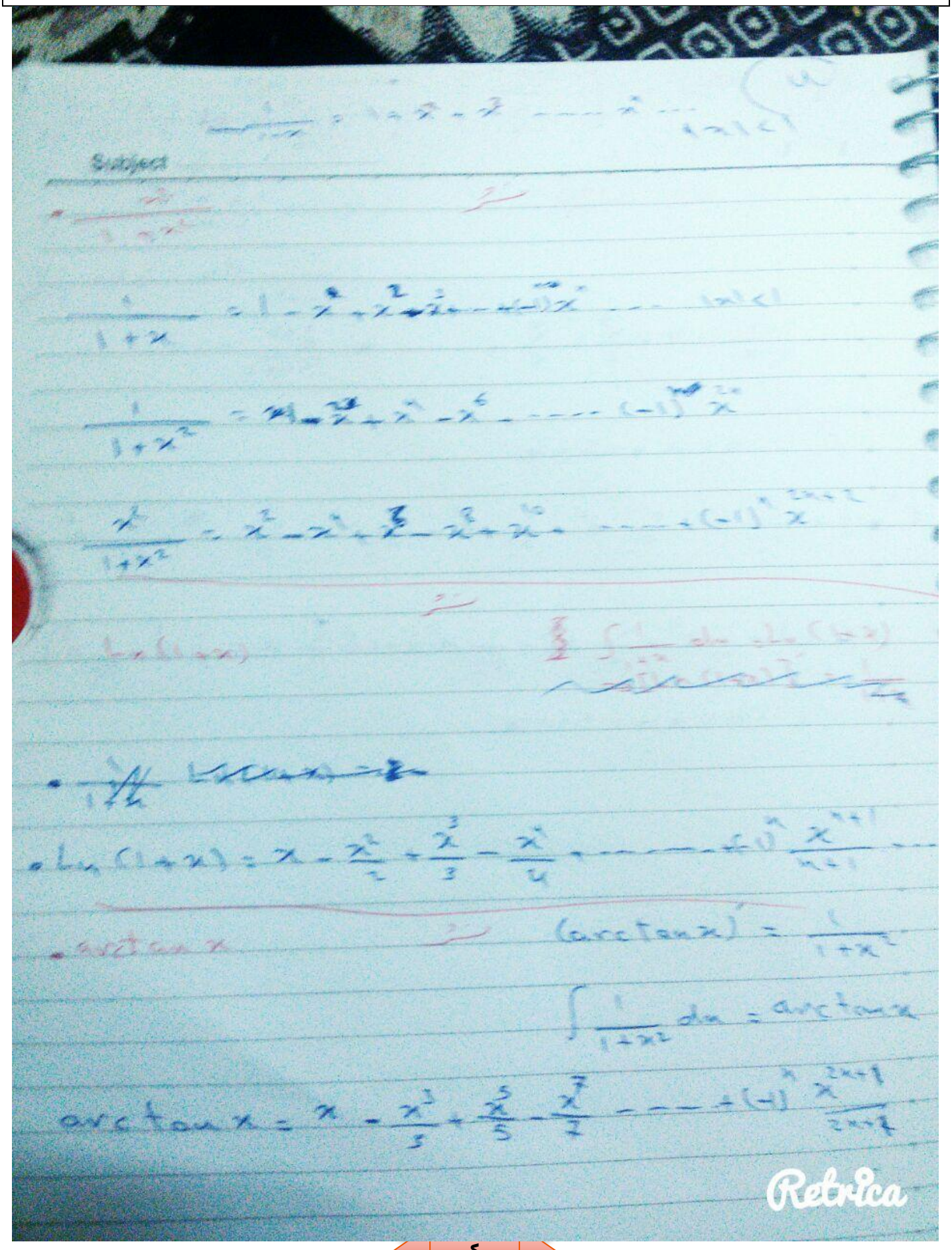
الدكتور : نايف طلي

المحاضرة : الثامنة عشرة "والأخيرة"


Rabia
Syria Math


2) arc tan a - arc tan b = arc tan (a-b)/(1+a.b)
Subject
2
3) arc tan x = arc Sin x/√(1+x²) ; x ∈ ℝ
α = arc tan x ⇒ x = tan α
Sin α = Sin α / √(cos²α + Sin²α)
نقسم بسط ومقام على cos
= tan α / √(1+tan²α) = x/√(1+x²)
arc Sin x = arc tan x/√(1-x²)
α = arc Sin x ⇒ x = Sin
arc sin
α = arc Sin x/√(1+x²)
arc tan x = arc Sin x/√(1+x²)
4) arc Sin x = arc tan x/√(1-x²)
α = arc Sin x = x = Sin α
tan α = Sin α / cos α = Sin α / √(1-Sin²α)
tan α = x/√(1-x²)
arc tan
α = arc tan x/√(1-x²)
Retrica


Subject
arc sin x = arc tan x/√(1-x²)
(sh x + ch x)^n = sh nx + ch nx
(e^x)^n = e^nx
sh x + ch x = e^x
1/(1-x) = 1 + x + x² + x³ + ---- + x^n ---- n = 0, 1, 2 ----
|x| < 1
1/(1-x²) = 1 + x² + x⁴ + ---- + x^2n + ---- |x| < 1
x²/(1-x²) = x² + x⁴ + x⁶ + ---- + x^(2n+2) |x| < 1
x²/(1-x)²
(1/(1-x))' = 1/(1-x)²
1/(1-x)² = 1 + 2x + 3x² + ---- + n x^(n-1) ----
x²/(1-x)² = x² + 2x³ + 3x⁴ + ---- + n x^(n+1) ----
Retrica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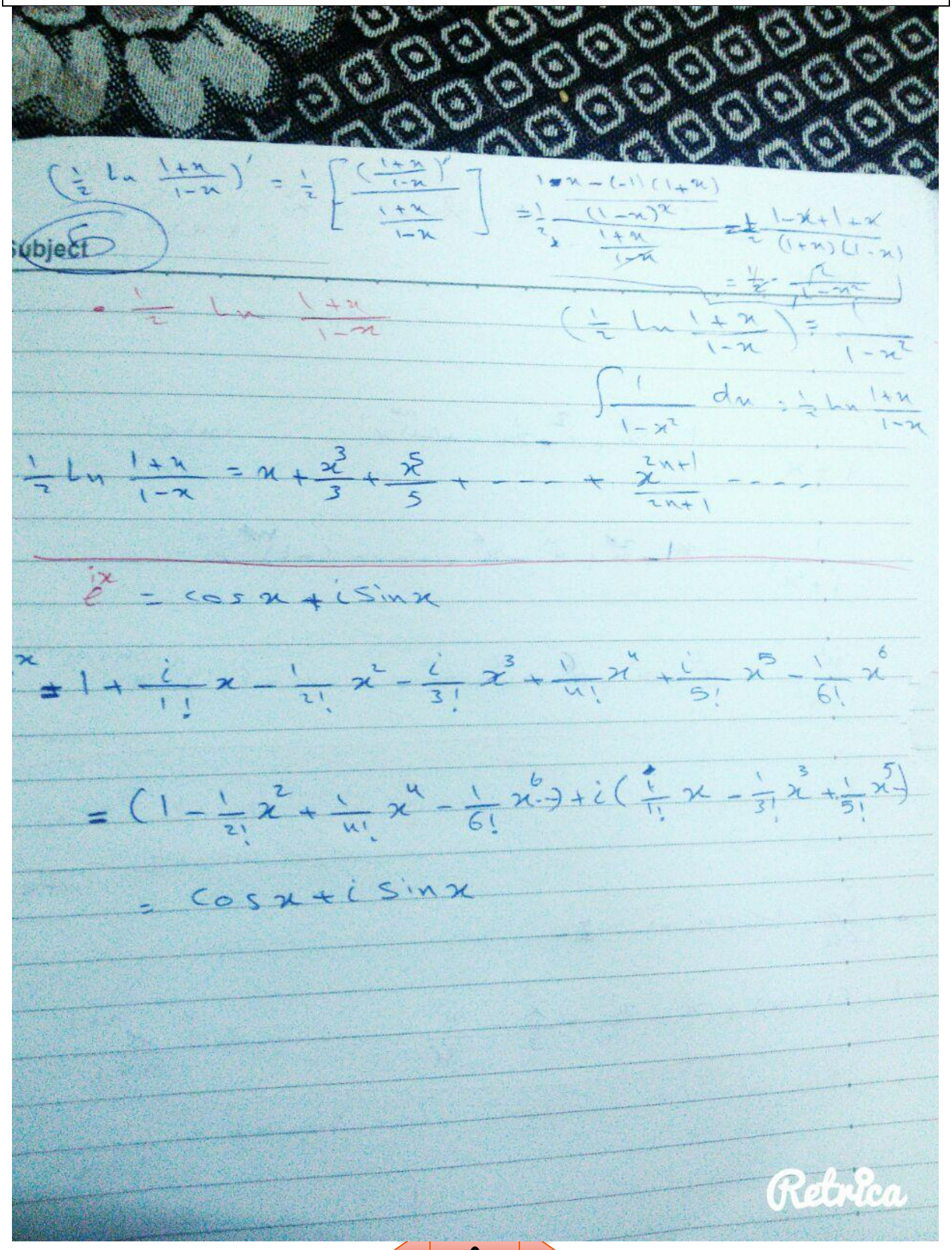
Subject
Retrica