13.04.20 17.1.1 det y = 5(x) , y' 1)  $y = 3\alpha^{2}$ ,  $\Delta y = f(x \cdot \Delta z) \cdot f(x) = 3\Delta y \cdot 3(x \cdot \Delta z)^{2} - 3z^{2} = 3(x^{2} \cdot \Delta z)^{2} - 3z^{2} = 3z^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3(x^{2} \cdot \Delta z)^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} - 3z^{2} - 3z^{2} = 3x^{2} \cdot 6\alpha \Delta z \cdot \Delta z^{2} - 3z^{2} - 3z^{2}$ 6232+ 32 + 332 (2xt 12) 5'(a) = Cim ax = Cim 5 02 (= 2+02) = 0] = - Lin 3(22+ 42) = 3( lim (22)+ lim 42) = 3(22+0)-62 2) y=sih se  $\Delta y = Sih(\alpha \cdot \Delta \alpha) - Sin \alpha = Sin d - Sih d = 2 sih d cos 2$ = 2 sin 2 + 1 2 cos 2 - 1 = sin(1+16) = sin L cos 4 + sin B cos d =  $2 \sin \frac{\Delta x}{2} \cos \frac{2z + \Delta x}{2} = 2 \sin \frac{\Delta x}{2} \cos (x + \frac{\Delta x}{2})$ y = lim A2 = lim 2. sin \$\frac{2}{2} \cos(2.\frac{62}{3}) = = lim (cos(2 = sa)) · lim 2. six(2) = = cos & . 1 = cos & N7.1.6.

 $5(a) \cdot \frac{1}{2}$ , scholare yalua.  $2 \cdot \frac{3}{3} - 5 \times 1 = 0$ = (9.245) - (52+1) = 9. (245) = - (62+1) nu. (2+1) -= 2(-3) 2 3-1 - 52+1 (h5 (xx + 1x) = -6 x 5/3 - 524 (hs (12+1+0)=-6a-5/3-5a+1 ln5-1=-62-5/3-52+1 ln5 2) f(2) = (x2 - 2)(3+52 -1) 5(a) = ((a - 2)(3 tg a - 1)) = (a 4-a) (stg a - 1) + (a 4-a) (star) = (403-1)(3+gx-1) + (24-2) - costac N7.1.27 1) 1=511 2  $y_1 \cdot (\sin^2 x)_n = ((\sin x)^2)_n = 2\sin x \cos x = \sin 2x$ 2) y = ln (arcly 3a) 8 = (ln(arolg32))2 = (ln(arolg(32)))2 = =  $\Gamma(\ln \alpha)'$ ,  $(arctg \alpha)'$ , (3a)'  $J = \Gamma(\ln a) = \frac{1}{a}$ ,  $arctg a = \frac{1}{(1+9a^2)}$  arctg (3a)'17.1.58

(lng)2 - \$ => y - 4 (lag)a lag = laz="" ; lag= sinzlaa, (lag) = (sine lae);

# = Ginae) laz = sinz(laa) = cosalna-sina => y'= y (cosalna - sina)=> en => & - sesina (cos a lha + sex 2) 2) 4= (2-1) \$ 2.2 lng + ln = (2-1) 2/2-2 ; lng = ln (2-1) + lnve+2 - (2 3/2-4) lny = 3 ln(2-1) - 1 (1(acs) - 5 (1(2+1) (lng) = (3/n(2-1) + 1/2 (n. 2) - 2 (n(2+1))  $\frac{4}{3} = \frac{3}{a-1} + \frac{1}{2(a-2)} - \frac{2}{3(a-1)} = 2$ =>  $y' = \frac{(\alpha - 1)^3 \sqrt{\alpha + 2}}{3 \sqrt{(\alpha + 1)^2}} \left( \frac{3}{\alpha - 1} + \frac{1}{2(\alpha + 2)} - \frac{2}{3(\alpha + 1)} \right)$