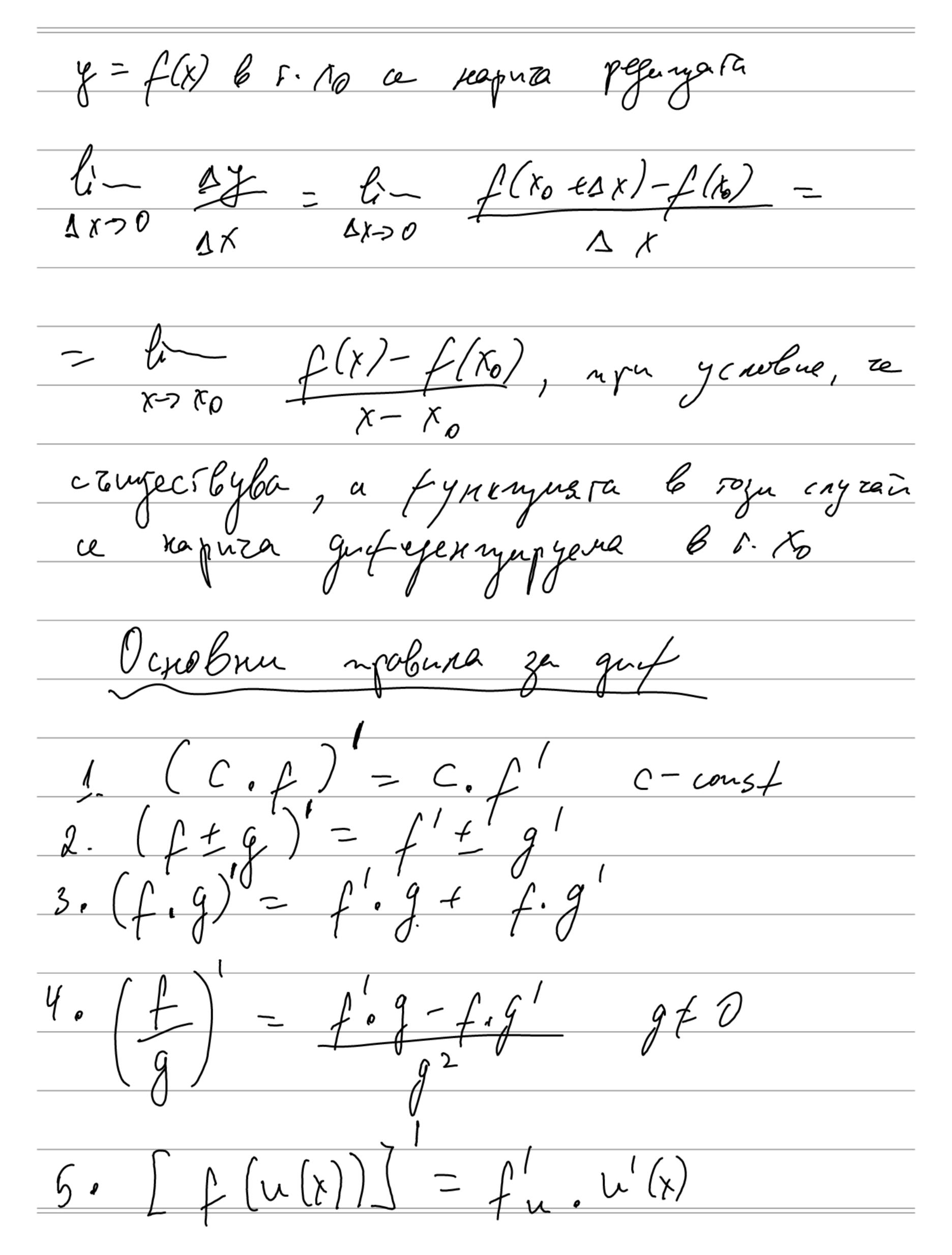
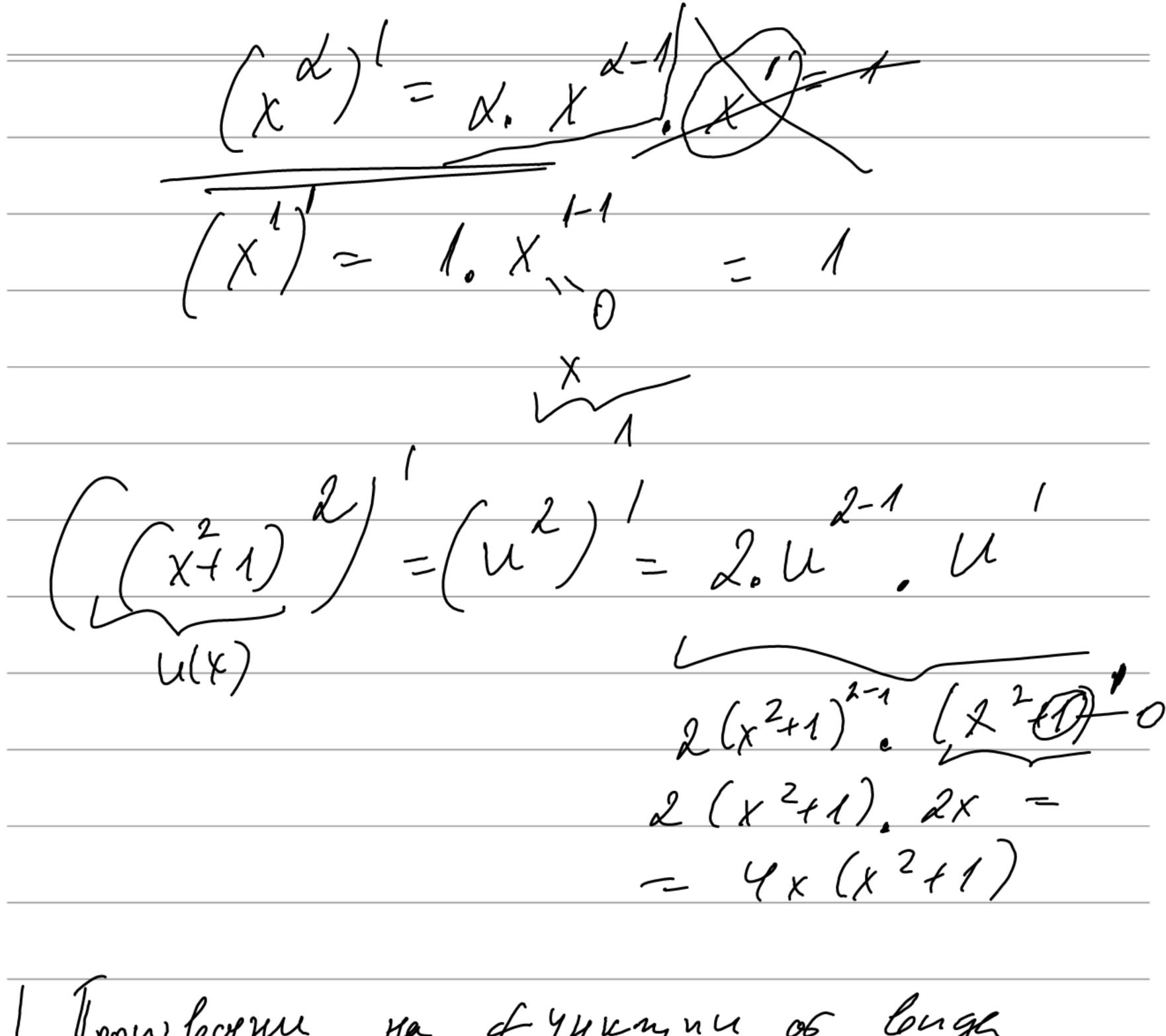
Hennergeratoct na fynkryng
def 28 f - f-4 7. a e jozka ra
Circiabane fe nengen. Br. a and lin p(x)= f(a) x->a t
lin p(x)= f(a)
$\chi - > \alpha T$
De f 30 Mazbarre, re f-ra f e
Henjeric Hara & 5-a and zh & pegnya
ZXn gn=1 e cxapsuya ron a u e uznon-
Henjerge kara le 5-a ano zex pegnya $2x_n y_{n-1}^{op}$ e exagonya von a ne uznon- nemo li f $(x_n) = f(a)$ $x \to ab$
$\gamma \rightarrow ab$
Ano C, 9: (a, 6)-> 1/2 ca renjerocrasi
Ans f, g: (a, b) -> 1/2 ca renjercocrasse le r- x o G (a, b) rorobe
ftg'f.g-> reenjer ochar
ftg; f.g -> renjectorare ft, nyn g f 0 -> renjectorare
$\frac{1}{g}$

(1) Da ce uzcregba za reenjercocratoct of so (Cx) - 5 smx x+0

 $\frac{1}{2} \frac{1}{2} \frac{1}{2} = 0$

Thu x f 0 fra f e neu jexternance guyar 79 e racino na gle neujer ocharu fyrkyn Hera passingane ciyas, rosaro x = 0 Sa ga stège t-tà renjektickata nju y-re & Def, a wenner ling f(x) -- f(0) x->0 lim smx - 1 f(0)21 f(x) = f(0) $x \to 0$ => f(x) e reenjeice Charc Aponslagra ma fra Hexa e gagera 4-5a f: X-> 12, X-1R n vercer Xo e Torra de CTBCTS-bake ka $X_1 x_0 e X$ Def 33 Tiponzbyra y = f'(xo) ren





Tponsbognu na fynknynu or longe

y = u, røgero u>0, ce nanupar, karo

a uznonzba fopnynara (l")=e", u'

u nyerraleznero y = e uy

y - (u) = (l")

$$0 \quad y = 6x^{2} - 7x + 1 \quad / y' = ?$$

$$y' = (6x^{2} - 7x + 1)' = (6x^{2})' - (7x)' + (1)' = 0$$

$$= 6 \cdot (x^{2})' - 7x + (1)' + (1)' = 0 = 0$$

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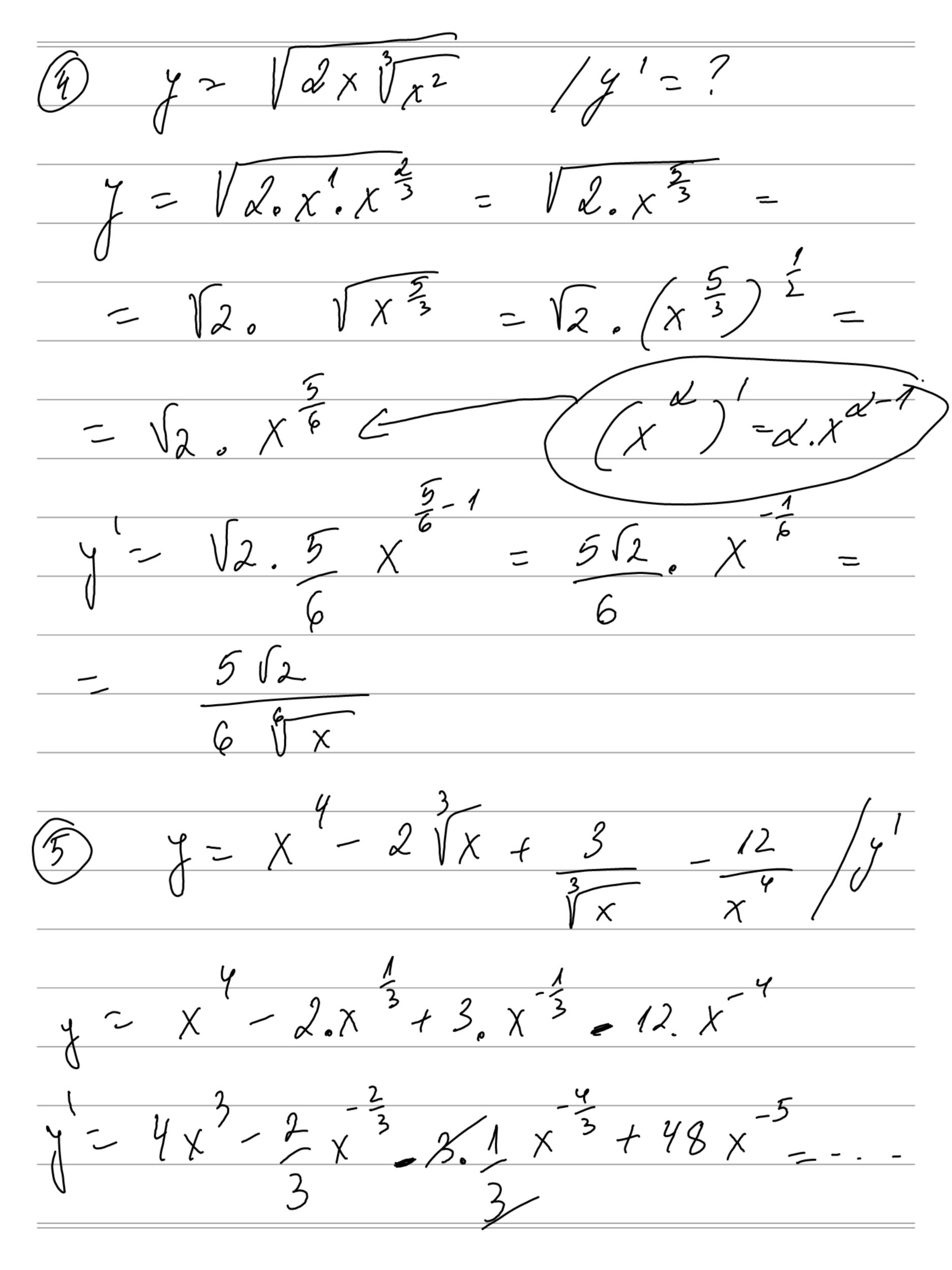
$$= 12 \times - 7 - 7 \cdot 7 + 0 = 0$$

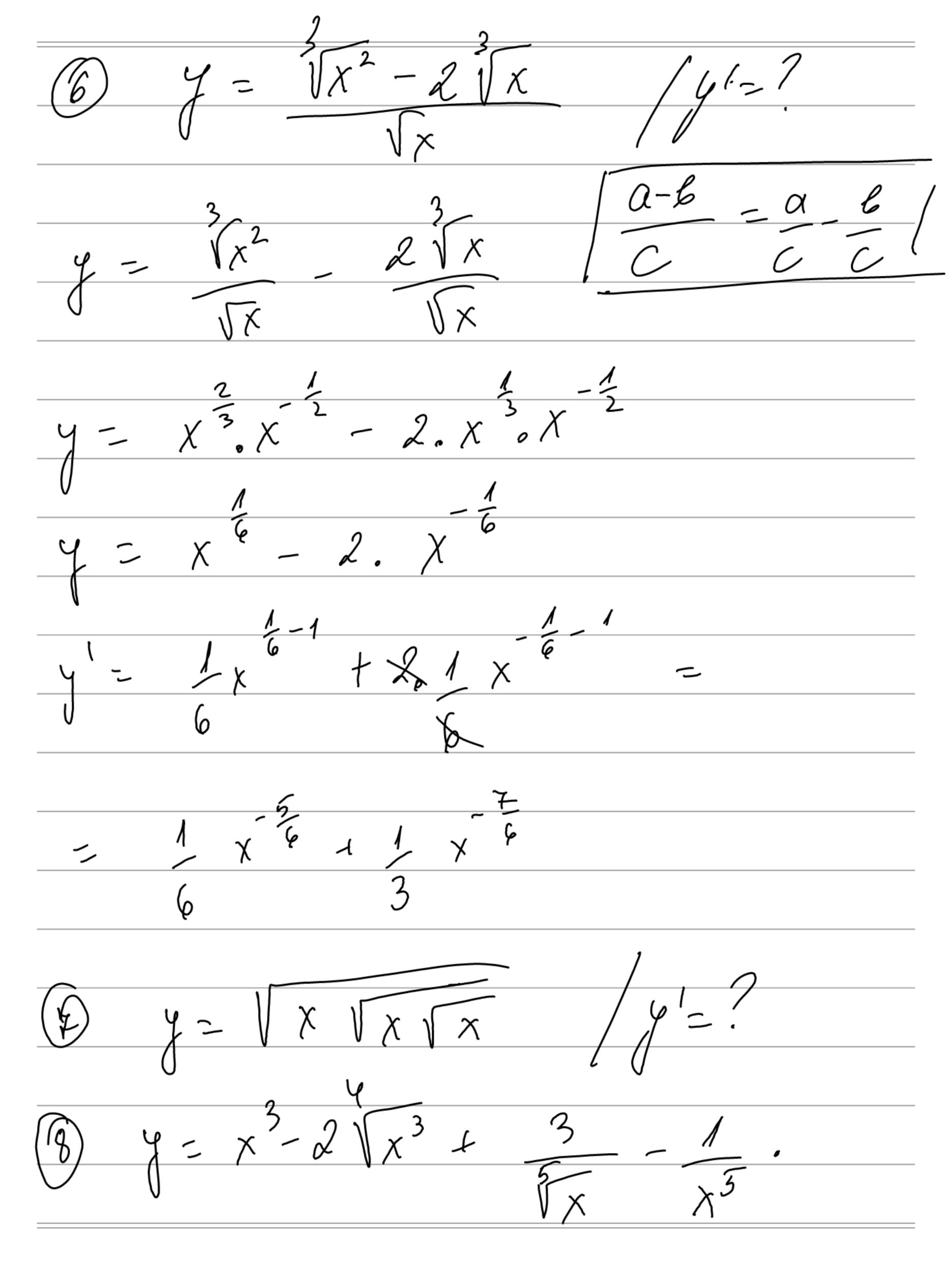
$$= 12 \times - 7 - 7 \cdot 7 + 0 = 0$$

$$= 12 \times - 7 - 7 + 0 = 0$$

$$= 12 \times - 7 - 7 + 0 = 0$$

$$= 12 \times - 7 - 7$$





(2) y = C (Sin x - cosx)

f g y = (e) (5, nx-105x) + e (5, nx-105x)

(5, nx-105x) + e (5, nx) - (05x) y = e (smx-cosx) + e (cosx + smx) = = e (gnx-vost + coss+smx) = = 2 gnx, ex (B) y=lnx. avcusx - snx /y=. y'=(lux. our cosx) - (sux)

e m ℓ . $m + \ell$. m $\left(\ln(5\chi^2) \right) = \frac{1}{5\chi^2} \cdot \left(5\chi^2 \right)'$ Y= (lnx), arcusx+ lnx, (arcusx) - (snx) y - 1. arcusx + lux. (-1)_ cosx

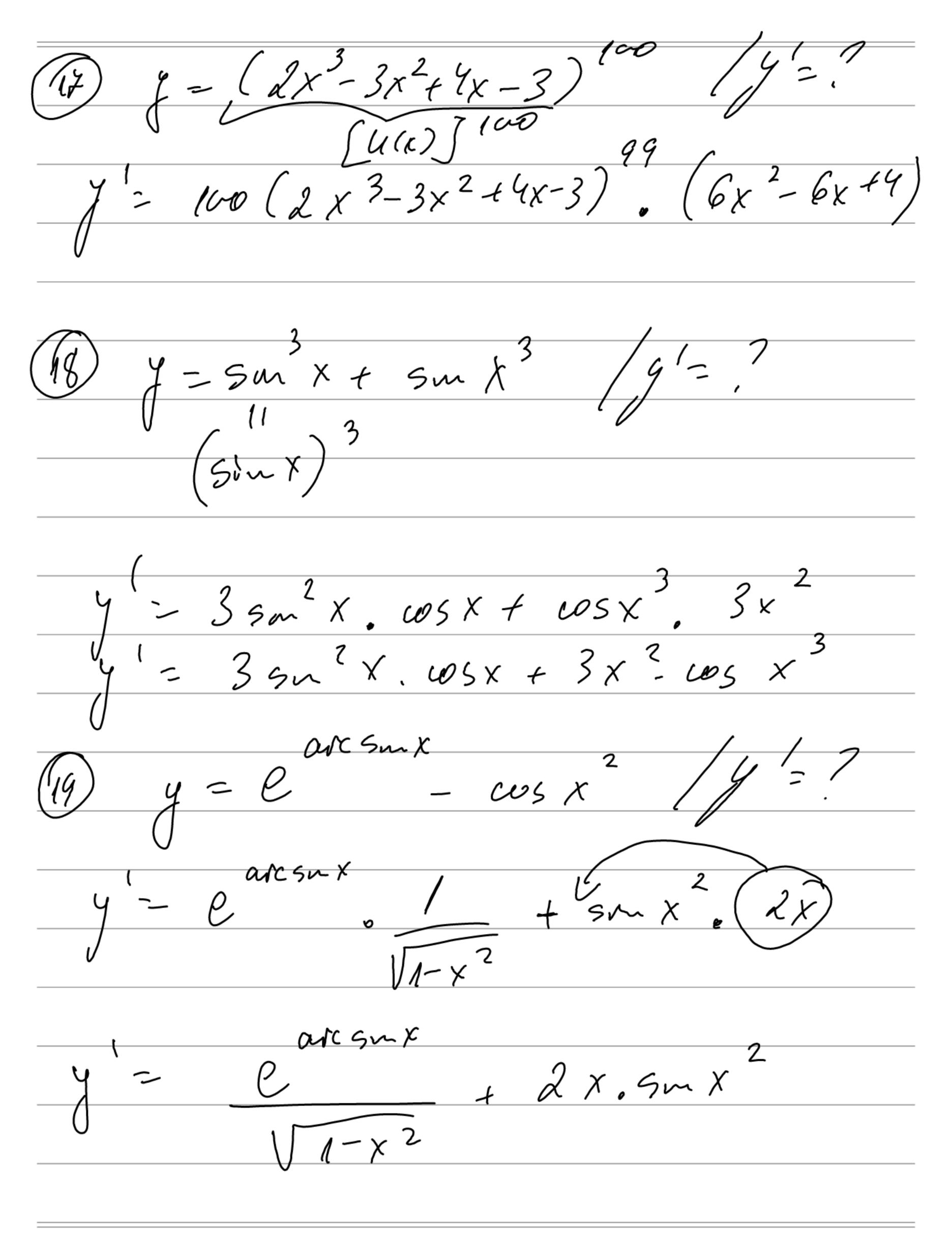
. VI-X2

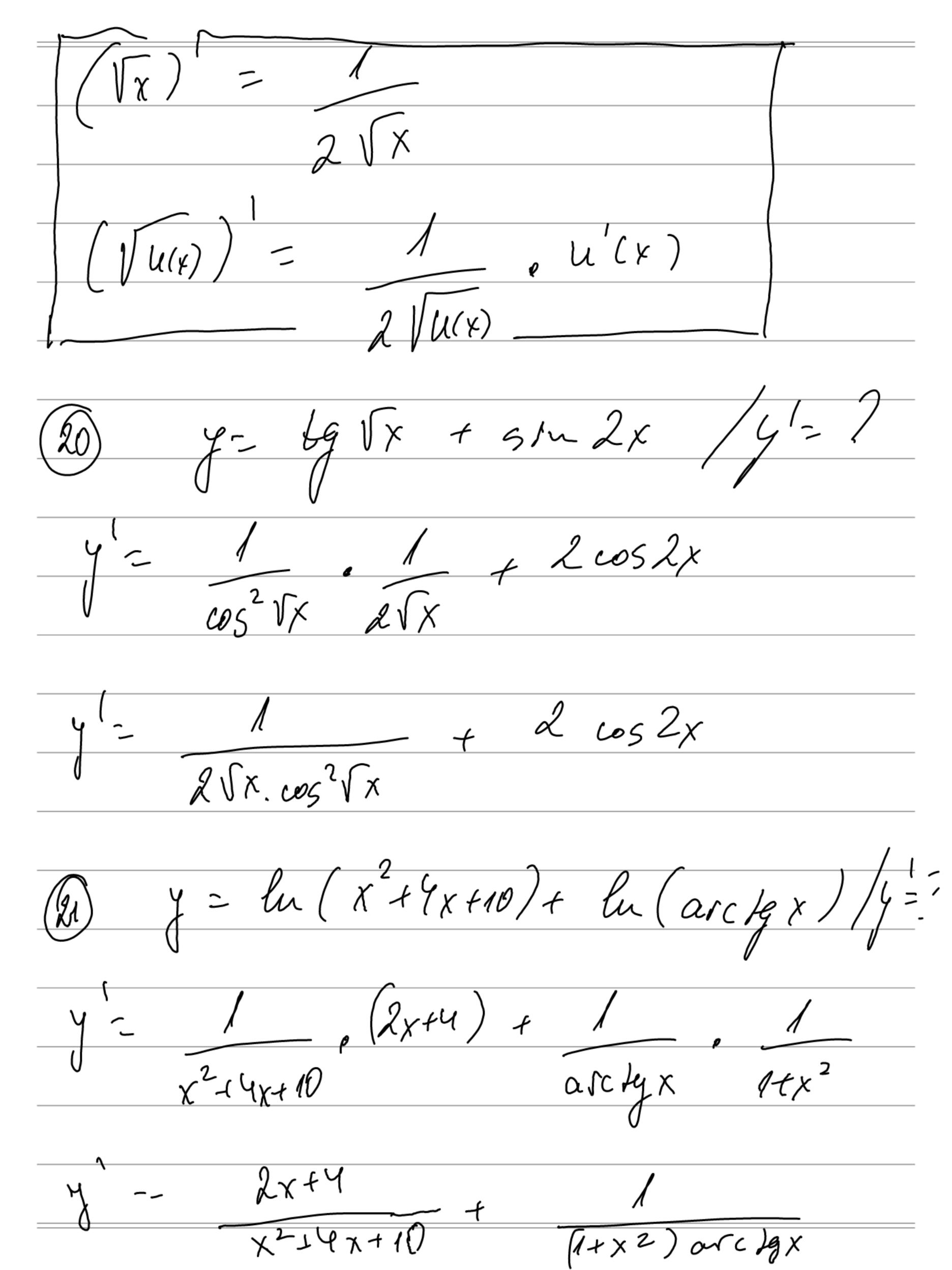
$$y' = \frac{2x}{x} - \frac{ux}{1-x^2} - \frac{2x}{1-x^2}$$

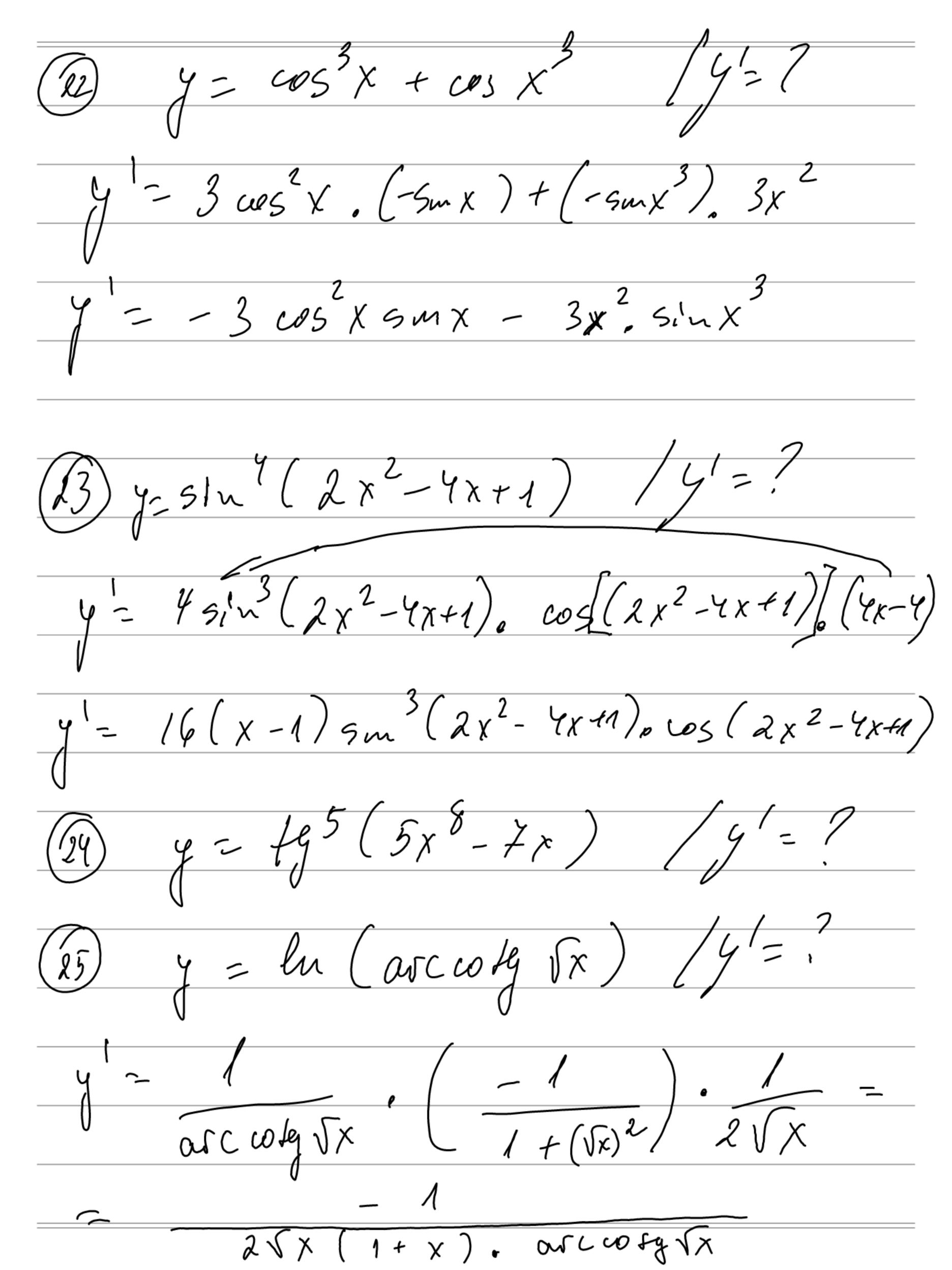
$$y' = \frac{2x}{1-x^2} - \frac{1}{2} \cdot \frac{1}{2}$$

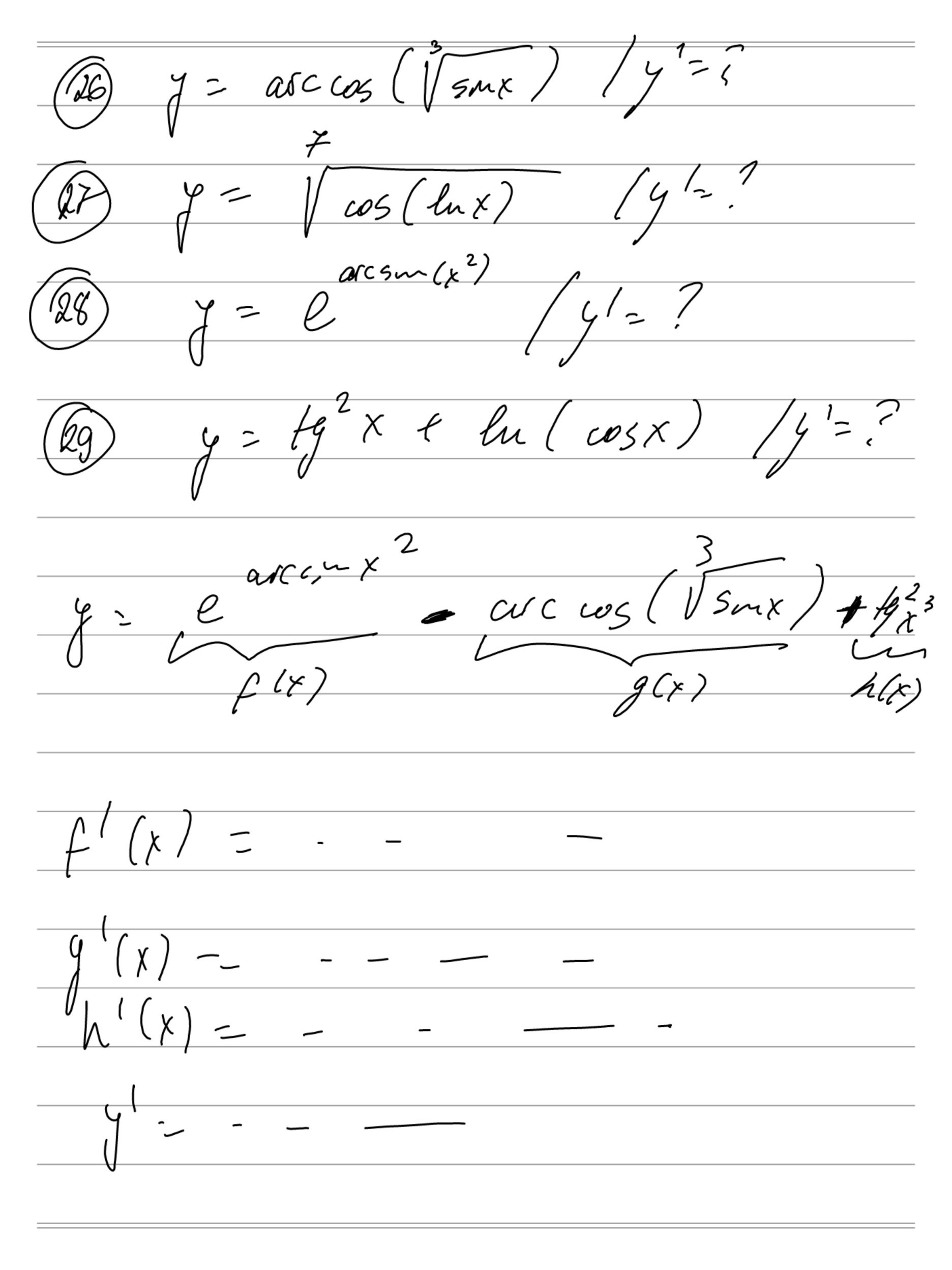
$$y' = \frac{2 - 2x^2 + 4x^2}{(1 - x^2)^2} = \frac{2 + 2x^2}{(1 - x^2)^2}$$

(3)
$$y = \frac{ascsinx}{1-x^2} / y^2 = ?$$
 $y' = \frac{(ascsinx)(1-x^2) - ascsnx \cdot (1-x^2)}{(1-x^2)^2}$
 $y' = \frac{1}{(1-x^2)^2} + 2xascsnx$
 $y' = \frac{\sqrt{1-x^2}}{(1-x^2)^2} + 2xascsnx$
 $y' = \frac{1-x^2}{(1-x^2)^2} + 2xascsnx$
 $y' = \frac{\sqrt{1-x^2}}{(1-x^2)^$





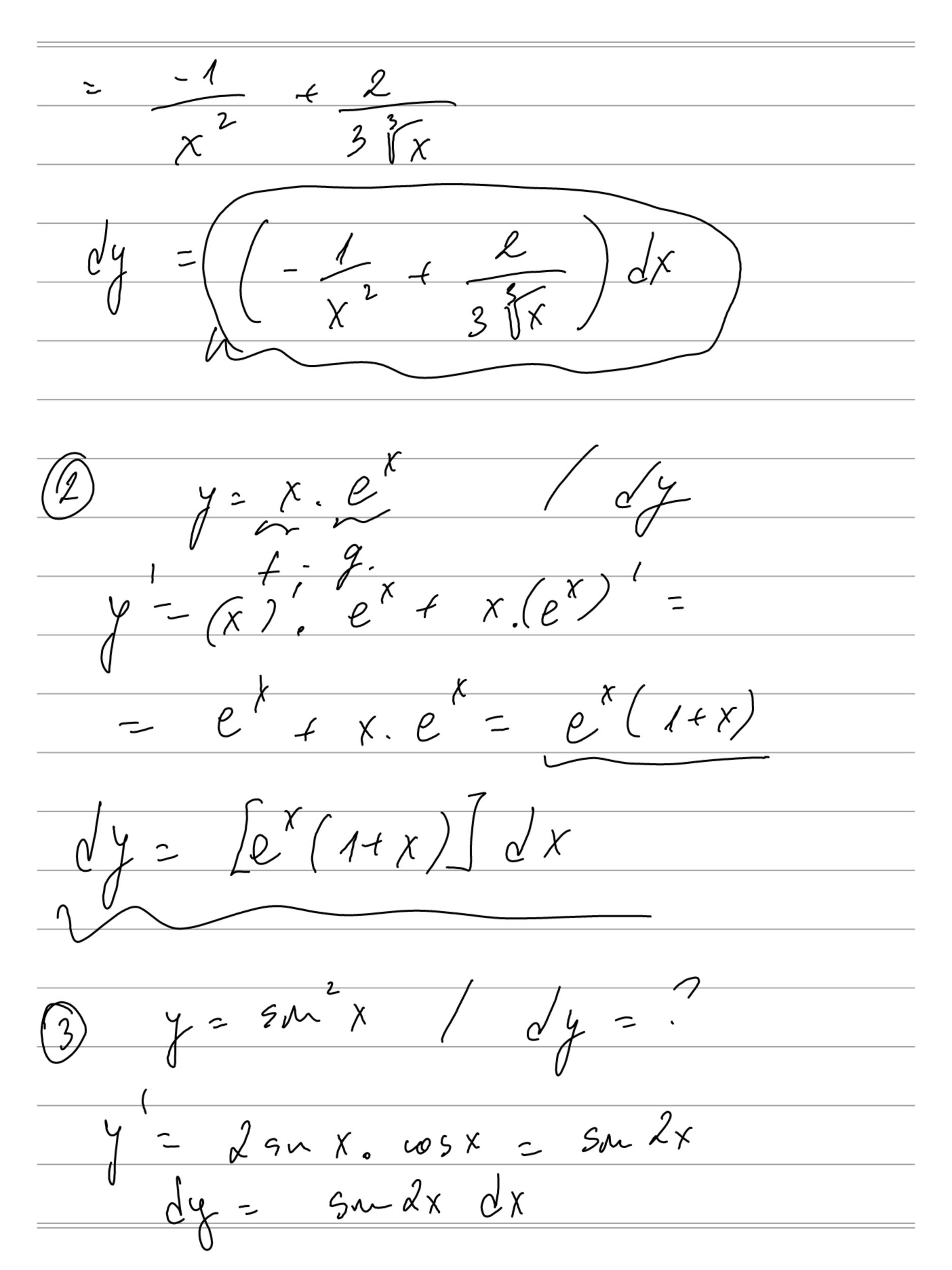


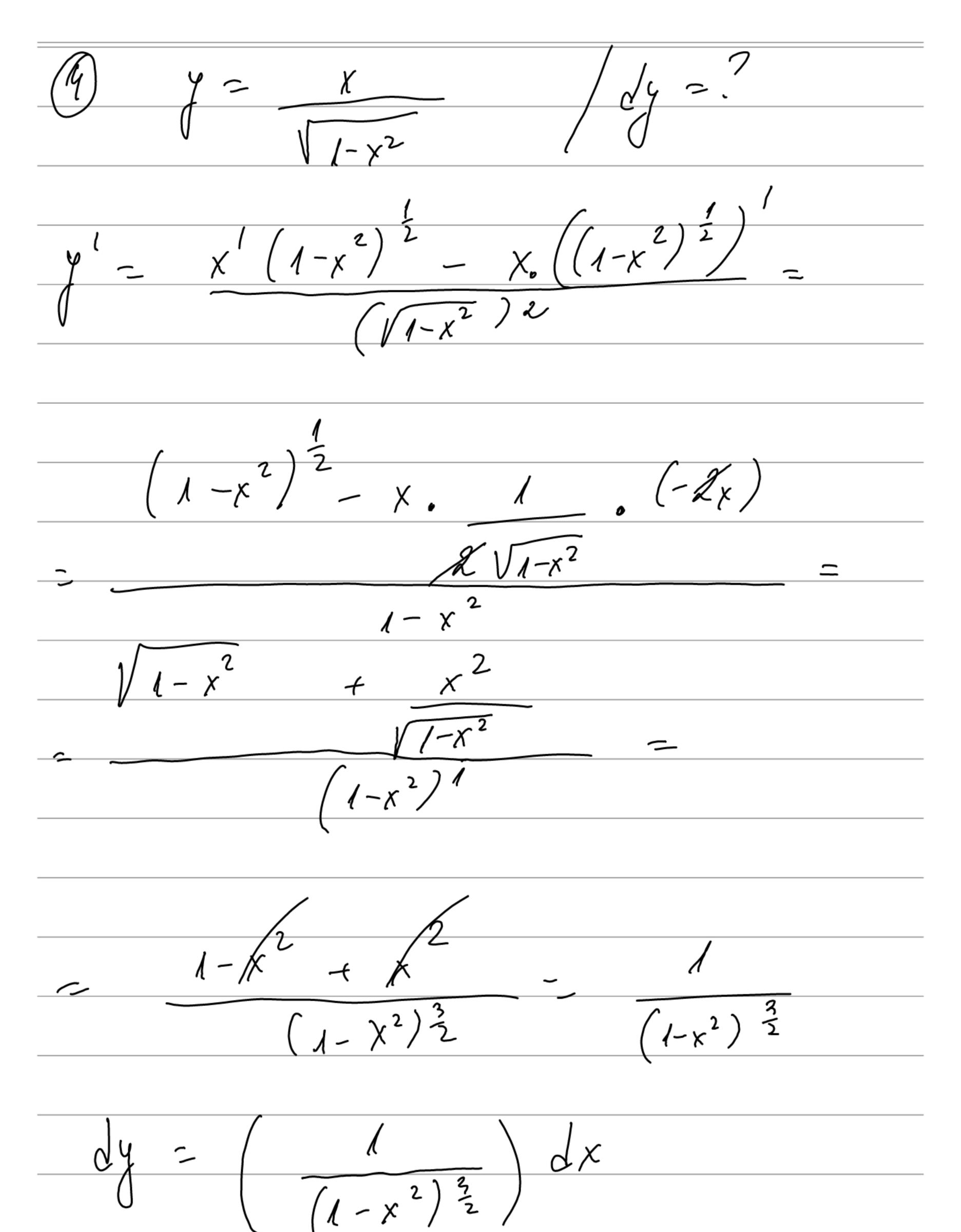


Dufereknyvar kar fr-2 ka egka kezaburuna npo re remilie Th 25 $\frac{1}{2}$ ynknyngsa y = f(x) egreg egennyngsae e $r \cdot x_0 =$ Ay e ragu rozra una ryesraesnero

Ay $= A \cdot D \times + O(Dx)$, xigero $A = const_a$ ein $O(Dx) = O \cdot T$ pu roba $A = f'(r_0)$ 0 c-x A ΔX Def 34 Axo f e gufesengusgena & T. Ko, ruxeñ nava fynkengusg ren

DX! df = f!(xo) DX ce rapurer
gufesenguar na f-ra f le r. Ko $d\left(\frac{1}{x} + \sqrt[3]{x^2}\right) = \left(\frac{1}{x} + \sqrt[3]{x^2}\right) dx$ y = x 1 x 2 = - x 2 + 2 x 3 =

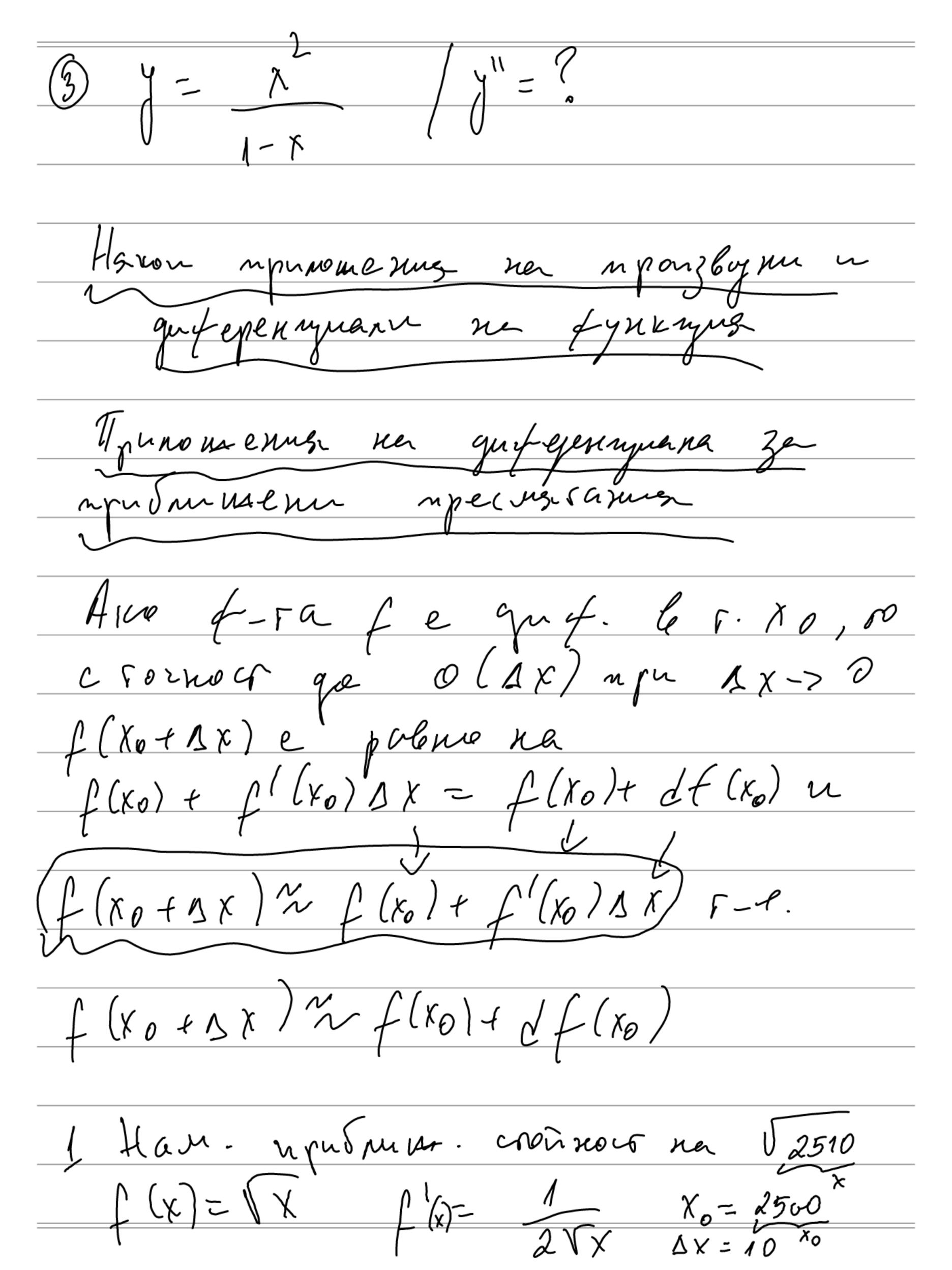


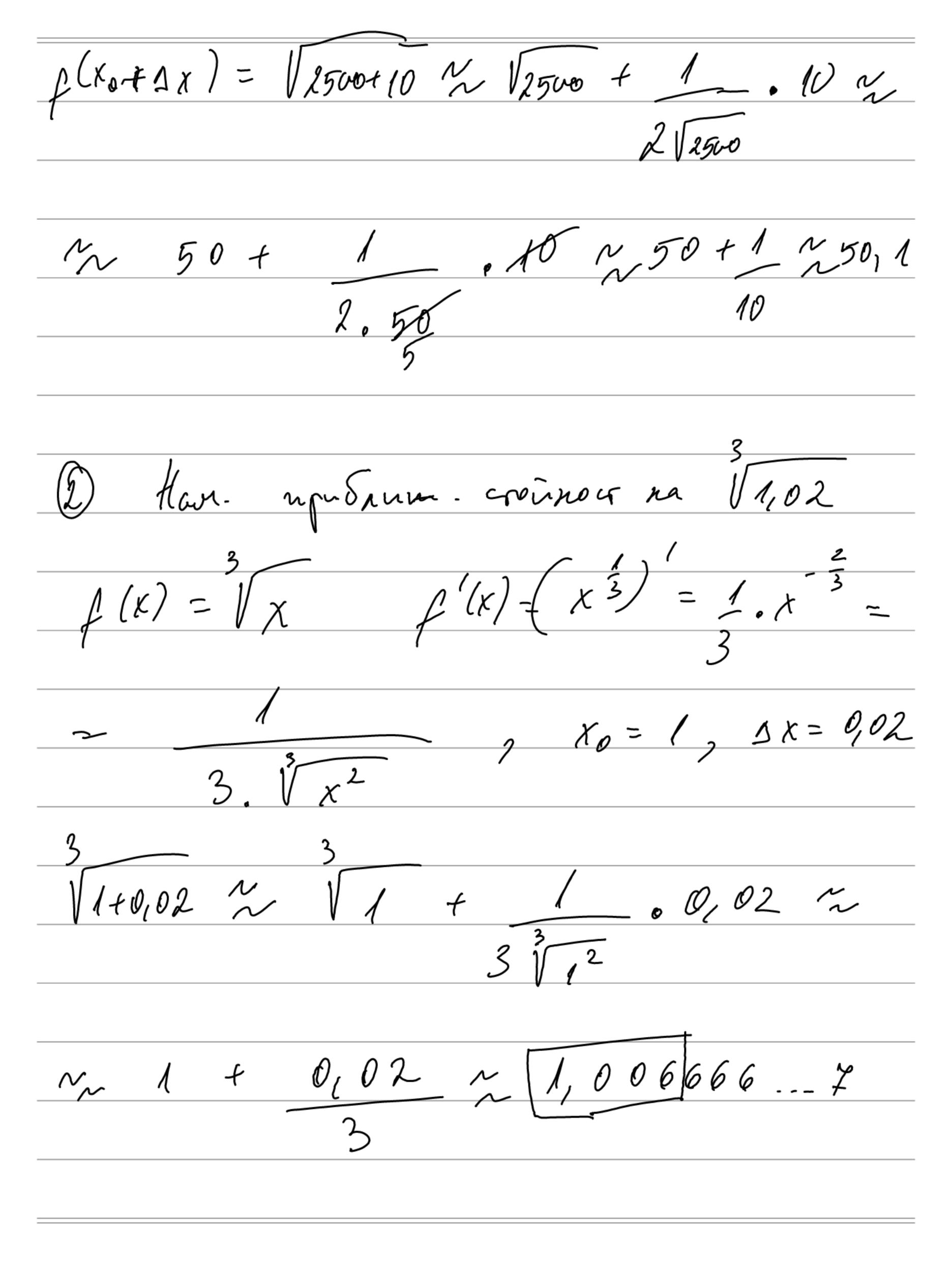


Monsbogner og no-brewer peg

Det 35 Toonsbyrure & Boopu v no-Bucou peg ren f-ru y = f(x) ce onjegenst vriggernleno nocnegobovenno nocjegerleon f(n) = $\left[f(n-1)(x) \right]$, (n=2,3,...) n p n n o no une sure, te coorbessureonepayon user concer peg ner f-50 y=f(x) ce onjege 125 nagyen bro no pychon $d^{n}y = d(d^{n-1}t), n = 2, 3, ---$ (b) Harrepere y", and y=3x2-6x+1 y' = 6x - 6 y'' = (6x - 6) = 6

(2) y = 0 x smx / y = ? y'= (e-x), sinx + e-x, (smx) y'- e-x (-1), smx + e-x. cosx y = - e sinx + e wsx y" = (-0, sinx) + (e, cosx) p=-R-X (-1), Smx + (-P-X), (wsx) 1 = (e, sux - e x cosx) $g' = -e^{-x} \cdot \omega_5 x + e^{-x} \cdot (-s_n x) =$ $= -e^{-x} \cdot \omega_5 x - e^{-x} \cdot s_n x$ y"= e-x sinx - e-x usx - e-x sinx y - - 2e - x w 5 x





(3) Hav. nous jussin. cro-noct na sin 180 $f(x) = gan \times \qquad f'(x) = cos \times$ $x_0 = 450 \qquad \Delta x = 30$ 9n (45° + 3°) 2 sn 45° + co545°. 3°

V2 " 1 = 17 180 180 180 3,1415 3,1415 $2 \left(1 + 17\right)$ 3 $\frac{\sqrt{2}}{2}\left(\frac{1+3,1415}{60}\right)\frac{\sqrt{0,8573}}{60}$

(9) Han. nousness voitoble se cos 31° ws (30° + 1°) $f(x) = ws x x_0 = 30°$ $f(x) = -s x x_0 = 30°$

