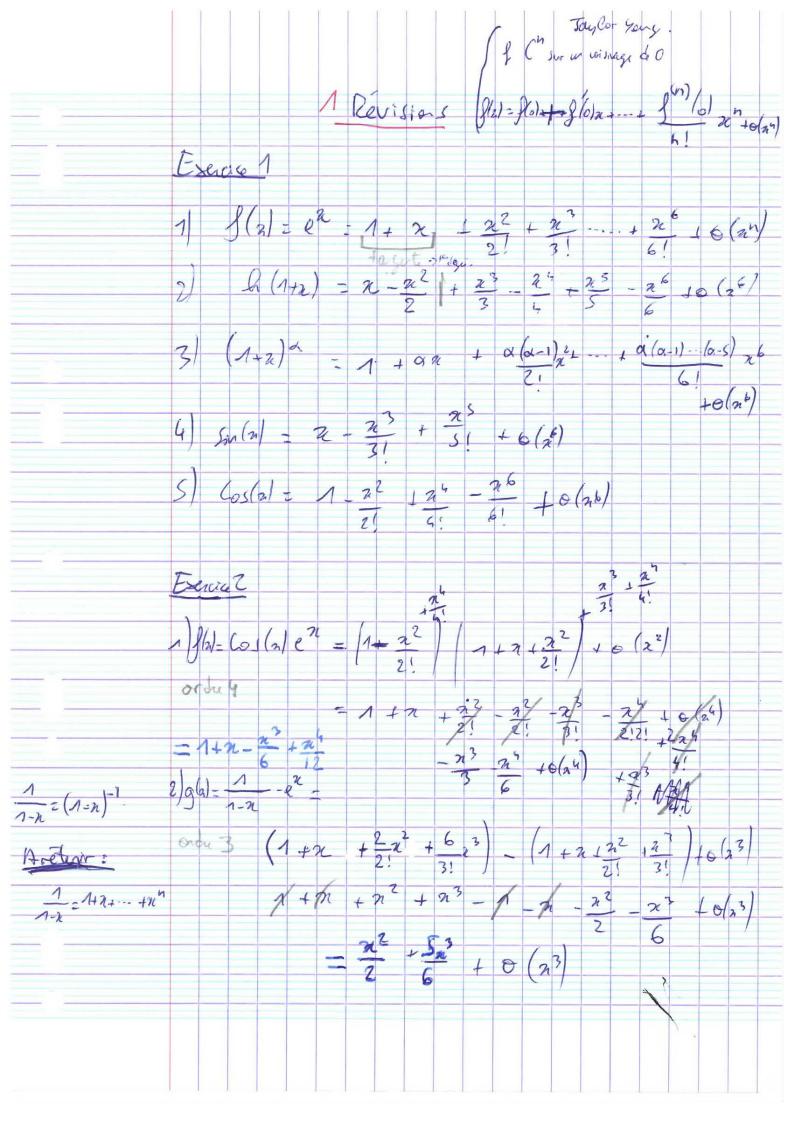
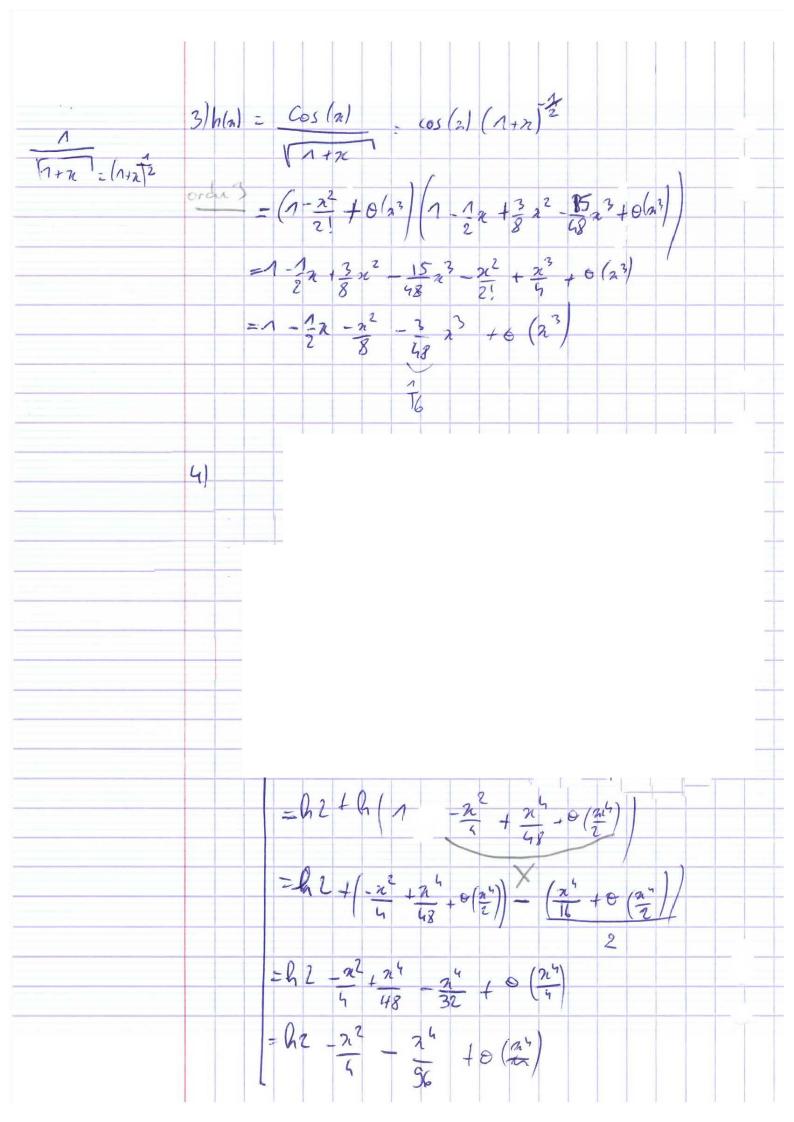
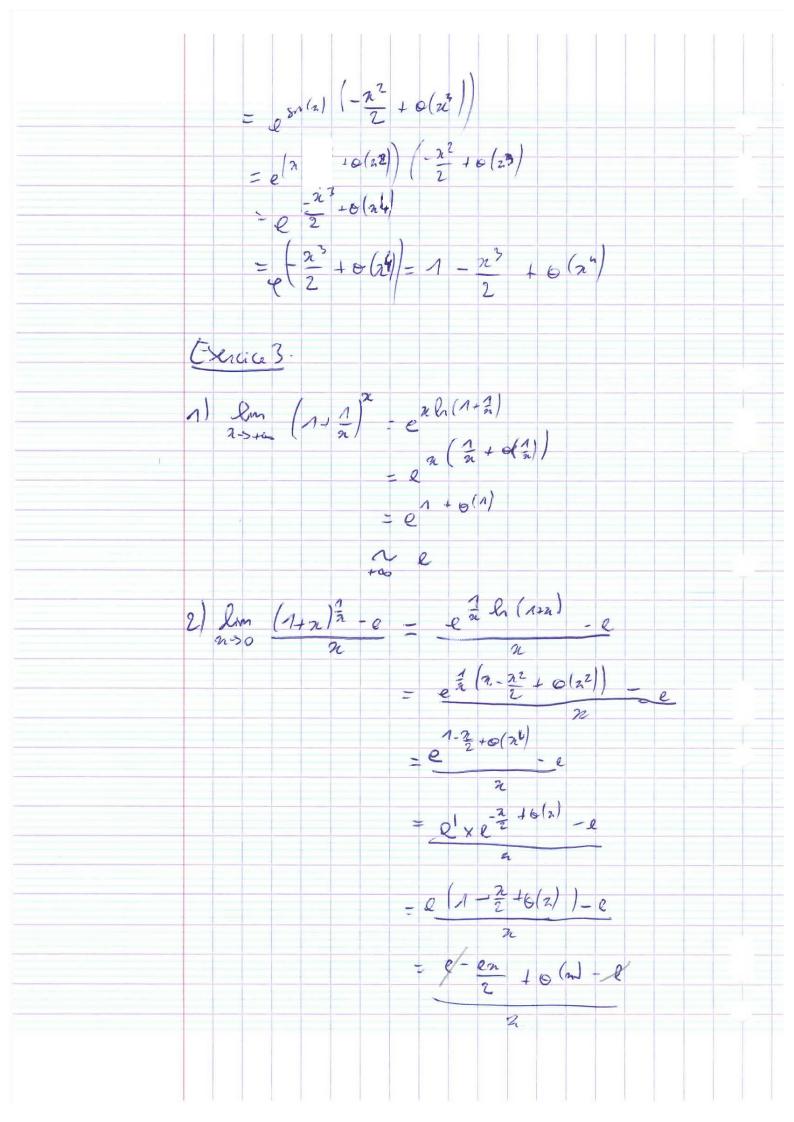
Roppels Sw les equivalents Propi de constant de le légar au voisnage de a Soughertaellement e a) On Live que f et à soit équivalentes en a si g (n) n->a Premes exemples . - 32 5 - 42 + 2 - 1 +00 - 32 5 · 323 vos en · Pa + 22 -3 Prop : graget grah dae grah · gref et gref done stog v sig os grande sont égales positisse ling estre pet En revande on re part par additioner des équipalents on a compose pas les équiralens (cf. cos 14)

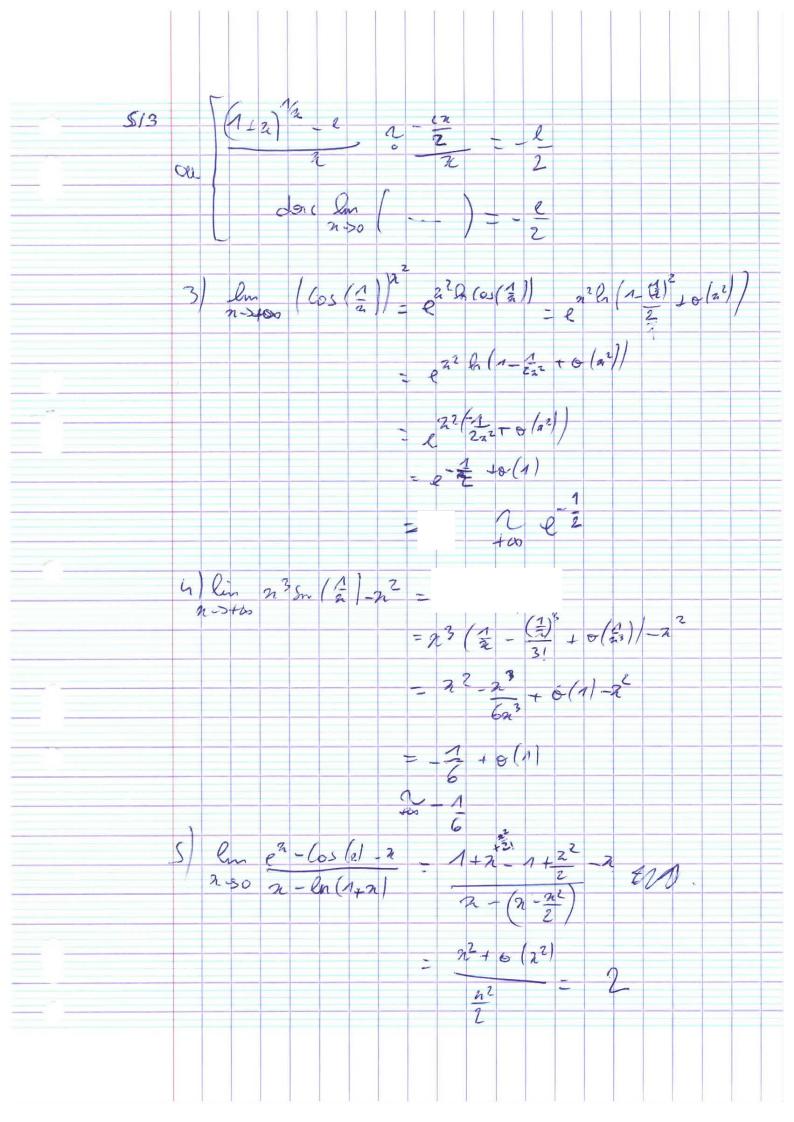
Equivalets Clarque. $S_{11}(a) = 2 \times Cos(a) - 1 = -\frac{a^2}{2}$ ln (1m) & n

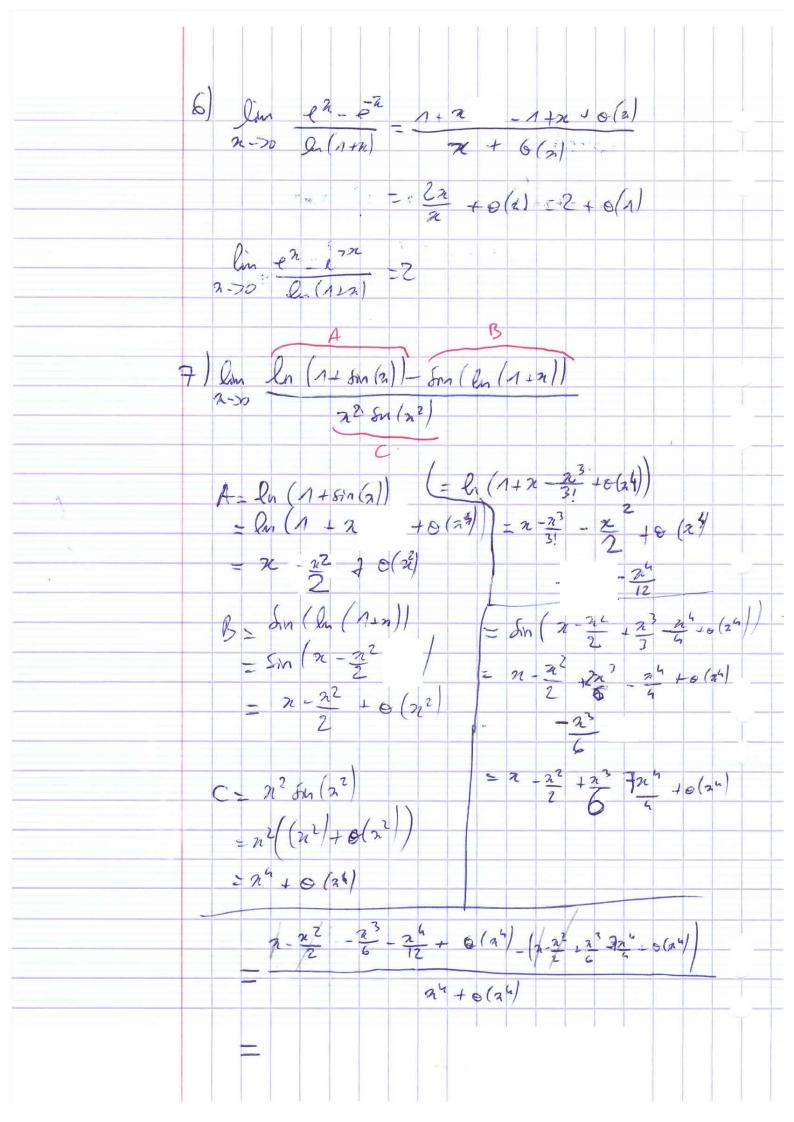




5) 1(2) = e (os(a) = exp(1-22 +21 +8 (24)) = e1 e-22 + 24 + o(24) $e^{(o \times n)} - e = \frac{n^2}{2}$ = e x (1+(-22 +24)+1 (a2 +24)2 +6(24)) = e × (1 - 22 + 21 + 1 (24) + 0 (24) reg adonous = 2 (1 - 22 + 24 16 (24) à sa trant e. 6) 202 = n (1 12 12 /+0/22) (1+22+80/22) 7-22+22+24 = (A+ 22+ 423) / 122 10(22) = n + n 2 + n + + + + + 6 (23) = 7+22 13 23+6(23) 7/ 8(2) = ((05(2)) Sim(m) $= e^{h \left(\left(\cos(z_{1}) \right) \sin(z_{1}) \right)}$ $= e^{\sin(z_{1})} \times h \left(\cos(z_{1}) \right)$ $= e^{\sin(z_{1})} \times h \left(1 - \frac{2z_{1}}{z_{1}} \right)$







Correction 2): ln (1+84(2))= 6 (1+2 -23 10(4)) = u - 1 u' + 1 u3 - 1 u' + o (u4) = 2-2 - 1 (2-2) + 7 (2-2) - 1 (0-2) + 7 (0-2) = 2-213 - 1 22 + 24 + 3 23 - 4 24 + 0 (24) = 2 -1 22+1 23 - 22 +0(24) -x-1222123-24 +0(24) An (Qn(1+2)) = Fin (2 - 122 + 132 - 124 + 0 (44)) = u - u3 to (u4) $= x - \frac{1}{2}x^{2} + \frac{1}{3}x^{3} - \frac{1}{5}x^{4} - \frac{1}{5}(x - \frac{1}{2}x^{2} + \frac{1}{3}x^{3} - \frac{1}{4}x^{3})^{3} + 6(x^{4})$ = 2-122 - 123 - 42 - 123 - 1 -3 × 28 × (-22) = 2 - 2 2 + 2 3 $A-B = -\frac{2^{4}}{12} + 6(2^{4})$ $= -\frac{1}{12} + 6(2^{4})$

a E Ru Gras Exerció 4: es: 2 -> es(2) et la(9): 20+> la (9(2)) fag to espes 2+1 ~ 2 +00 en+1 = e +> 1 200 e 2+1 x e2 Ry: L'exporentiell amplifie 4 las écants et re conserve pas l'ondre de gandern 2 \$ __ > 1 1 = 3-9 - 1 5 corp at 5 continue 3) ng frag to e(g) a eg) $\begin{array}{c|c}
f = e^{2x} & & & & & & & & & & \\
g = e^{2x} & & & & & & & & \\
\end{array}$ $\begin{array}{c|c}
f = e^{2x} & & & & & & & \\
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f = e^{2x} & & & & \\
\end{array}$ $\begin{array}{c|c}
f = e^{2x} & & & & \\
\end{array}$

