Exo 1369 Theodore

f : $a\frac{\partial f}{\partial x} + b\frac{\partial f}{\partial y}$ → $x = au + cv$
$y = bu + dv$

Avec c, d tq $ad - bc \neq 0$

$g(u,v) = f(au + cv, bu + dv)$

$\frac{\partial g}{\partial u} = a\frac{\partial f}{\partial x} + b\frac{\partial f}{\partial y} = g(u,v)$

Donc g est solution de
$\frac{\partial g}{\partial u} = g(u,v)$ $\quad g(u,v) = C(v)e^{u}$

Mq $C(v) = \tilde{0}$
Sinon $\exists v_0$ tq $C(v_0) \neq 0$

On a alors
$g(u,v_0) = C(v_0)e^{u} \xrightarrow[u \to +\infty]{} +\infty$

ABSURDE car g est bornée

Donc $C(v) = \tilde{0}$ Donc $\boxed{f = \tilde{0}}$