## Cms 8

- 1. Derivata partiala  $\frac{\partial f}{\partial x_i}(a) = \lim_{t \to 0} \frac{f(a+t \cdot e_i) f(a)}{t}$
- 2. Function diferentialile
- 3. Priterial de diferentialilitate

wc 1

Fix 
$$f: \mathbb{R}^3 \to \mathbb{R}$$
,  $f(x_1y_1 + y_1) = x^1 + y^1 + y^1 + y^1 - xy - x + 2y$   
Anototi is  $f$  difficultiabile  $f: \mathbb{R}^3$   $f: det$   
 $f(x_1y_1 + y_1) = x^1 + y^1 + y^1 - xy - x + 2y$   
Anototi is  $f$  difficultiabile  $f: \mathbb{R}^3$   $f: det$ 

Fix 
$$f: \mathbb{R}^2 \to \mathbb{R}$$
,  $f(x_1y) = \begin{cases} \frac{xy}{x^2 + y^2}, & (x_1y) \neq (0,0) \\ 0, & (x_1y) = (0,0) \end{cases}$ 

- a) I trod continuitates lin f
- 1) Det 11, 21
- e) Itud. djerentialilitates lui f

Fix 
$$f: \mathbb{R}^2 \to \mathbb{R}$$
,  $f(x,y) = \begin{cases} xy \cdot \sin \frac{1}{x^2 + y^2}, (x,y) \neq (0,0) \\ 0, (x,y) = (0,0) \end{cases}$ 

- a) I trad continuitates lim &
- L) Det dt, dt
- e) Itud. desempiabilitates lui f