

## Esercizi massimi e minimi relativi

- ①  $F(x, y) = x^2 + 3y^2 + \frac{x}{2}$
- ②  $f(x, y) = x^3 y^2 - x^4 y^2 - x^3 y^3$
- ③  $F(x, y) = x^4 + y^2 + x^2 y$
- ④  $f(x, y) = x^3 + 2x^2 y - 4xy^2 - 8y^3$
- ⑤  $F(x, y) = (x - \cos y)^2 + y^2 - \pi y$
- ⑥  $f(x, y) = 2x^3 + 3x^2 - x^2 y^2$
- ⑦  $F(x, y) = x^6 - y^4$
- ⑧  $F(x, y) = e^{x^2 + y^3 - 6x - 3y^2}$
- ⑨  $F(x, y) = y^2 - 6x^2 y + 3x^4$

## Esercizi massimi e minimi assoluti

- ①  $f(x, y) = x^2 + y^2 - \frac{x}{2}$   
 $D = \{x^2 + y^2 \leq 1, (x-1)^2 + (y+1)^2 \leq 1\}$
- ②  $f(x, y) = x^2 + y^2 - \frac{x}{2}$   
 $D = \{(x, y) \in \mathbb{R}^2 : x^2 + y^2 \leq 1, (x-1)^2 + (y+1)^2 \leq 1\}$
- ③  $F(x, y) = 3x^2 + 3y^2 - 6y - 12$

De l'ellisse di centro  $(0, 1)$  e semiassi di lunghezza

2 between 1 and 2

$$(u) \quad F(x, y) = (1 - y)(2 - x^2 - y)$$

$$D = \{ (x, y) \in \mathbb{R}^2 : 1 \leq y \leq 2 \}$$