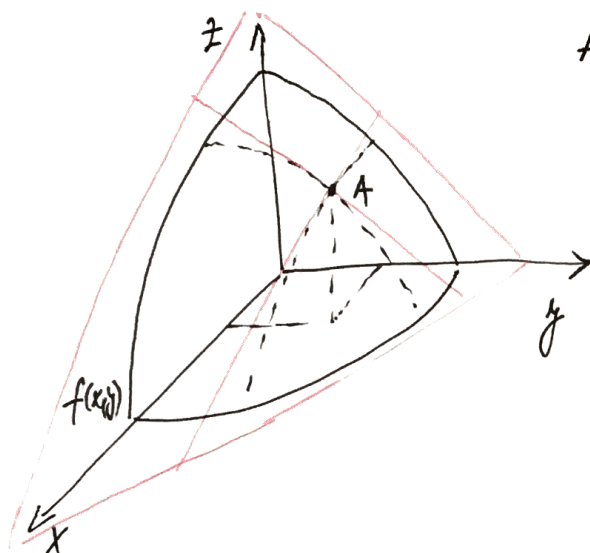


# Tečna' rovna



$$A = [x_0, y_0, z_0]$$

$$ax + by + cz + d = 0$$

Tečna' rovna v bodem dotyku  $A = [x_0, y_0, z_0]$

$$\underbrace{f_x(x_0, y_0)}_{(x_0, y_0)}(x - x_0) + \underbrace{f_y(x_0, y_0)}_{(x_0, y_0)}(y - y_0) + (z - z_0) = 0$$

(Pr)  $f(x, y) = x^2 y^3 - 4y$   $A = [-1; 2; ?]$   $0 = z_0$

$$z_0 = f(x_0, y_0) = (-1)^2 2^3 - 4 \cdot 2 = \underline{0}$$

$$f_x(x, y) = 2xy^3 \quad f_x(-1, 2) = -16$$

$$f_y(x, y) = 3x^2 y^2 - 4 \quad f_y(-1, 2) = 8$$

$$-16 \cdot (x - (-1)) + 8 \cdot (y - 2) + z - 0 = 0$$

$$-16(x + 1) + 8(y - 2) + z = 0$$

$$-16x - 16 + 8y - 16 + z = 0$$

$$\boxed{-16x + 8y + z - 32 = 0}$$