REŠI

$$3x^2e^y dx + (x^3e^y - 1)dy = 0$$

$P = 3x^2e^y \Rightarrow P_y = 3x^2e^y$
$Q = x^3e^y - 1 \Rightarrow Q_x = 3x^2e^y$
} EKSAKTNA DIF. EN.

$u_x \overset{*}{=} 3x^2e^y$

$u_y \overset{**}{=} x^3e^y - 1$

$u_x \overset{*}{=} 3x^2e^y \Rightarrow u \overset{(1)}{=} x^3e^y + \varphi(y)$

$\Rightarrow u_y = x^3e^y + \varphi'(y)$
$u_y \overset{**}{=} x^3e^y - 1$
} $\Rightarrow$

$\Rightarrow \varphi'(y) = -1$

$\Rightarrow \varphi(y) = -y + C$

$\overset{(1)}{\Rightarrow} u = x^3e^y - y + C$

REŠITEV : $du = 0 \Rightarrow u(x,y) = D$

$x^3e^y - y + C = D$

$x^3e^y - y = D - C = E$

$\underline{x^3e^y - y = E}$