

Bagaimana ide kalian untuk menentukan fungsi $M(x,y)$ sedemikian sehingga PD berikut PD eksak.

$$M(x,y) dx + (2x^3y^3 + x^4y) dy = 0.$$

$\Downarrow$

$$\frac{\partial f}{\partial x}$$

$\Downarrow$

$$\frac{\partial f}{\partial y}$$

PD eksak jika

$$\frac{\partial M(x,y)}{\partial y}$$

$$\frac{\partial N(x,y)}{\partial x}$$

$$\frac{\partial M(x,y)}{\partial y}$$

$$\frac{\partial (2x^3y^3 + x^4y)}{\partial x}$$

$$\frac{\partial M(x,y)}{\partial y}$$

$$= 4xy^3 + 4x^3y$$

$$\int \frac{\partial M(x,y)}{\partial y} = \int 4xy^3 + 4x^3y$$

$$M(x,y) = xy^4 + 2x^3y^2 + \phi(y).$$

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