

CVIČENIA Z PARCIÁLNYCH DIFERENCIÁLNYCH ROVNÍC
DOMÁCA ÚLOHA 7

Nájdite všeobecné riešenie rovníc:

- v utorok príklady s párnym číslom
- vo štvrtok príklady s nepárnym číslom

946. $y \frac{\partial z}{\partial x} + x \frac{\partial z}{\partial y} = x - y.$ 947. $e^x \frac{\partial z}{\partial x} + y^2 \frac{\partial z}{\partial y} = ye^x.$
948. $2x \frac{\partial z}{\partial x} + (y - x) \frac{\partial z}{\partial y} - x^2 = 0.$
949. $xy \frac{\partial z}{\partial x} - x^2 \frac{\partial z}{\partial y} = yz.$
950. $x \frac{\partial z}{\partial x} + 2y \frac{\partial z}{\partial y} = x^2y + z.$
951. $(x^2 + y^2) \frac{\partial z}{\partial x} + 2xy \frac{\partial z}{\partial y} + z^2 = 0.$
952. $2y^4 \frac{\partial z}{\partial x} - xy \frac{\partial z}{\partial y} = x \sqrt{z^2 + 1}.$
953. $x^2z \frac{\partial z}{\partial x} + y^2z \frac{\partial z}{\partial y} = x + y.$
954. $yz \frac{\partial z}{\partial x} - xz \frac{\partial z}{\partial y} = e^z.$
955. $(z - y)^2 \frac{\partial z}{\partial x} + xz \frac{\partial z}{\partial y} = xy.$
956. $xy \frac{\partial z}{\partial x} + (x - 2z) \frac{\partial z}{\partial y} = yz.$
957. $y \frac{\partial z}{\partial x} + z \frac{\partial z}{\partial y} = \frac{y}{x}.$
958. $\sin^2 x \frac{\partial z}{\partial x} + \operatorname{tg} z \frac{\partial z}{\partial y} = \cos^2 z.$
959. $(x + z) \frac{\partial z}{\partial x} + (y + z) \frac{\partial z}{\partial y} = x + y.$
960. $(xz + y) \frac{\partial z}{\partial x} + (x + yz) \frac{\partial z}{\partial y} = 1 - z^2.$
961. $(y + z) \frac{\partial u}{\partial x} + (z + x) \frac{\partial u}{\partial y} + (x + y) \frac{\partial u}{\partial z} = u.$
962. $x \frac{\partial u}{\partial x} + y \frac{\partial u}{\partial y} + (z + u) \frac{\partial u}{\partial z} = xy.$
963. $(u - x) \frac{\partial u}{\partial x} + (u - y) \frac{\partial u}{\partial y} - z \frac{\partial u}{\partial z} = x + y.$