

1203.

$$z = \operatorname{arccot} \frac{y}{1+x^2}$$

$$z'_x = \left( \operatorname{arccot} \frac{y}{1+x^2} \right)'_x = \frac{1}{1 + \frac{y^2}{(1+x^2)^2}} \cdot y \left( (1+x^2)^{-1} \right)'_x =$$

$$= \frac{y}{\frac{(1+x^2)^2 + y^2}{(1+x^2)^2}} \cdot (-1) \frac{2x}{(1+x^2)^2} = - \frac{2xy}{(1+x^2)((1+x^2)^2 + y^2)} = - \frac{2xy}{(1+x^2)^2 + y^2}$$

$$z'_y = \left( \operatorname{arccot} \frac{y}{1+x^2} \right)'_y = \frac{1}{1 + \frac{y^2}{(1+x^2)^2}} \cdot \frac{1}{1+x^2} =$$

$$= \frac{1}{\frac{(1+x^2)^2 + y^2}{(1+x^2)^2} \cdot (1+x^2)} = \frac{1+x^2}{(1+x^2)^2 + y^2}$$