

1. 次の関数の偏導関数 z_x, z_y を求めよ.

<p>(1) $z = 3x + 2y$</p> <p>$z_x =$</p> <p>$z_y =$</p>	<p>(2) $z = x^2y + 2xy^2 - x^3y$</p> <p>$z_x =$</p> <p>$z_y =$</p>	<p>(3) $z = e^{x+2y}$</p> <p>$z_x =$</p> <p>$z_y =$</p>
<p>(4) $z = \frac{1}{3x + y^2}$</p> <p>$z_x =$</p> <p>$z_y =$</p>	<p>(5) $z = \log(3x + 2y)$</p> <p>$z_x =$</p> <p>$z_y =$</p>	<p>(6) $z = \sin(3x + y^2)$</p> <p>$z_x =$</p> <p>$z_y =$</p>
<p>(7) $z = \frac{xy}{x + y}$</p> <p>$z_x =$</p> <p>$z_y =$</p>	<p>(8) $z = xe^{-y}$</p> <p>$z_x =$</p> <p>$z_y =$</p>	<p>(9) $z = \cos(x^3y)$</p> <p>$z_x =$</p> <p>$z_y =$</p>

2. 次の合成関数について, $\frac{\partial z}{\partial u}, \frac{\partial z}{\partial v}$ を求めよ.

$$z = x^4y^3, \quad x = 2u + 3v + 2, \quad y = u - v - 1$$

$$\frac{\partial z}{\partial u} =$$

$$\frac{\partial z}{\partial v} =$$

学籍番号	氏名