Question 1

(a) We evaluate each of the partial derivatives of f:

$$\frac{\partial f}{\partial x} = y + 2z^2$$

$$\frac{\partial x}{\partial y} = x - 10yz$$

$$\frac{\partial f}{\partial x} = y + 2z^2$$

$$\frac{\partial f}{\partial y} = x - 10yz$$

$$\frac{\partial f}{\partial z} = 4xz - 5y^2$$