$x\boldsymbol{e_x} + y\boldsymbol{e_y}$

$\left(x\left(x^2+y^2\right)\right)\boldsymbol{e_x} + \left(y\left(x^2+y^2\right)\right)\boldsymbol{e_y}$

$4x^2 + 4y^2$

$8x\boldsymbol{e_x} + 8y\boldsymbol{e_y}$