$$f := x \to \text{sqrt}(x^2 + y)$$

$$f := x \mapsto \sqrt{x^2 + y}$$

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

$$\Rightarrow diff(diff(f(x), x), x)$$

$$-\frac{x^2}{(x^2 + y)^{3/2}} + \frac{1}{\sqrt{x^2 + y}}$$
(3)
$$\Rightarrow diff(diff(f(x), y), y)$$

$$-\frac{1}{4(x^2 + y)^{3/2}}$$
(5)