

תרגיל פונקציונאלי

$$\cdot f(x) \cdot f(y) = f(x+y) + xy, f: \mathbb{R} \rightarrow \mathbb{R} \quad .1$$

$$\cdot f(y) + f(x + f(y)) = y + f(f(x) + f(f(y))), f: \mathbb{R} \rightarrow \mathbb{R} \quad .2$$

$$\cdot f(x)f(y)f(z) = 9f(z + xy \cdot f(z)), f: \mathbb{R}_{>0} \rightarrow \mathbb{R}_{>0} \quad .3$$

$$\cdot f(x^2) + f(xy) = f(x)f(y) + y \cdot f(x) + x \cdot f(x+y), f: \mathbb{R} \rightarrow \mathbb{R} \quad .4$$

$$\cdot f(x)^2 + 2y \cdot f(x) + f(y) = x \cdot f(y + f(x)), f: \mathbb{R} \rightarrow \mathbb{R} \quad .5$$

$$\cdot f(f(x) + y) = f(x^2 - y) + 4f(x)y, f: \mathbb{R} \rightarrow \mathbb{R} \quad .6$$

$$\cdot f(x - y + f(y)) = f(x) + f(y), f: \mathbb{Z} \rightarrow \mathbb{Z} \quad .7$$

$$\cdot f(x + y^2) = f(x) + |y \cdot f(y)|, f: \mathbb{R} \rightarrow \mathbb{R} \quad .8$$

בתאבון!