HW (week 1)

① if $f(x) = \frac{1}{x+2}$ and $g(x) = \frac{1}{2} - 2$, is $g = f^{-1}$?

$y = 2x + 1$

$x = 2y + 1$

$x - 1 = 2y$

$y = \frac{x-1}{2}$

$y = ?$

$\boxed{fx = y}$ – replace

$y = \frac{1}{x+2}$

$x = \frac{1}{y+2}$

$y + 2 = \frac{1}{x}$

$g = (f^{-1})$ – обратная функция
inverse function

$y = \frac{1}{x} - 2$

② inv. function $f(x) = 2 + \sqrt{x-4}$

$y = 2 + \sqrt{x-4}$

$x = 2 + \sqrt{y-4}$

$(x-2)^2 = \sqrt{y-4}^2$

$(x-2)^2 = y - 4$

$y = (x-2)^2 + 4 \Rightarrow$ inv. function