

نام و نام خانوادگی پاسخنامه تشریحی تکلیف شماره ۱۰۰ ... کلاس دوم متوسطه ...

$2y = 3x - 1 \rightarrow 2x = 2y - 1 \rightarrow y = \frac{2x+1}{2}$
 حالت اول: $x=0 \rightarrow y = \frac{1}{2}$
 حالت دوم: $y=0 \rightarrow x = -\frac{1}{2}$
 $\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} = \frac{1}{8}$

تابع معکوس برای $y = \sqrt{x-2} + 1$
 $y - 1 = \sqrt{x-2} \rightarrow y^2 - 2y + 1 = x - 2 \rightarrow x = y^2 - 2y + 3$
 $x = y^2 - 2y + 3$
 $y = \sqrt{x-2} + 1$
 $y - 1 = \sqrt{x-2}$
 $(y-1)^2 = x-2$
 $x = (y-1)^2 + 2$
 $x = y^2 - 2y + 3$

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

$g(x) = \frac{x}{\sqrt{x-5}}$
 $g(x) = \frac{x}{\sqrt{x-5}}$
 $g(x) = \frac{x}{\sqrt{x-5}}$
 $g(x) = \frac{x}{\sqrt{x-5}}$

$y = \begin{cases} (x-2)^2 - 4 + k & x \geq 2 \\ -(x-2)^2 + 4 + 3k & x < 2 \end{cases}$
 $-13 \geq k$
 $-13 \geq k$

$k - 2 \geq 3k + 1$

$2k \leq -12 \rightarrow k \leq -6$

$$f = \begin{cases} fu & u \in \mathbb{N} \\ vu & u \in \mathbb{N} \end{cases} \rightarrow \text{such } y = \frac{1}{2}u \quad u \in \mathbb{N} \\ y = \frac{1}{2}u \quad u \in \mathbb{N}$$

$$\frac{1}{2}u + \frac{1}{2}u = \frac{1+1}{2}u = \frac{2}{2}u = 1u = \frac{1}{1}u \rightarrow \frac{1}{2}u + \frac{1}{2}u = \frac{1}{1}u$$

$$\frac{1}{2}u - \frac{1}{2}u = \frac{1}{2}u \rightarrow y = \frac{1}{2}u - \frac{1}{2}u \quad \text{aabb} = \frac{u}{4f}$$

$$f(x) = -x \rightarrow \frac{1}{x+m} = -x \rightarrow x+m = -1 \Rightarrow m = -x-1 \quad f \circ f^{-1}(u) = u$$

$$f(u) = \frac{u+1}{u-1} \Rightarrow f^{-1}(u) = \frac{u+1}{u-1} \Rightarrow \frac{u+1}{u-1} + u = u$$

$$\frac{u+1}{u-1} = -u \Rightarrow u+1 = -u(u-1) \Rightarrow u+1 = -u^2+u \Rightarrow u^2 = 0 \Rightarrow u = 0$$

$$f(x) = \frac{u+1}{u-1} \rightarrow y = \frac{u+1}{u-1} \rightarrow y = \frac{u+1}{u-1} \rightarrow y = \frac{u+1}{u-1}$$

$$\frac{u+1}{u-1} = \frac{u+1}{u-1} \Rightarrow \frac{u+1}{u-1} = \frac{u+1}{u-1} \Rightarrow \frac{u+1}{u-1} = \frac{u+1}{u-1}$$

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$$f(u-v) = t \rightarrow f^{-1}(t) = u-v \rightarrow u = \frac{f^{-1}(t)}{v}$$

$$g\left(\frac{u}{v}\right) = v-t \rightarrow g^{-1}(v-t) = \frac{u}{v} \rightarrow u = v(g^{-1}(v-t))$$

$$t = -v \rightarrow f^{-1}(-v) + g^{-1}(v) = u$$

$$f(g(y)) = y \quad f(u) = (u-1) + \frac{1}{2}u \rightarrow y = (u-1) + \frac{1}{2}u \quad (u-1) + \frac{1}{2}u$$

$$u = y - (u-1) \quad g(u) = u - \frac{1}{2}u \rightarrow g(u) = u - \frac{1}{2}u$$

$$t = g(u) = u - \frac{1}{2}u = \frac{1}{2}u \rightarrow u = 2t$$

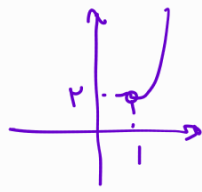
$$f\left(u + \frac{1}{2}u\right)$$

$$[u] = [u], [v] = [v] \rightarrow [u] = \frac{1}{2}[u] \rightarrow [u] = \frac{1}{2}[u] \quad f^{-1}(u) = u - \frac{1}{2}u$$

$$f-g = u + \frac{1}{2}u - u - \frac{1}{2}u = \frac{1}{2}u$$

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$$y = n^2 - 2n + 2 \rightarrow$$



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$$y = (n-1)^2 + 2 \rightarrow n-1 = \pm \sqrt{y-2} \quad R\phi^{-1} D\phi = [1, +\infty)$$

+ قابل مبدل

$$n = \pm \sqrt{y-2} + 1 \rightarrow \phi^{-1}(n) = \sqrt{n-2} + 1$$

$$D\phi^{-1} \subseteq R\phi, \quad n \geq 2$$

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$$y = n^2 - 2n + 2, \quad n \geq 2$$

$$\phi^{-1}(n) = \sqrt{n-2} + 1 \rightarrow n \geq 4$$

$$D\phi^{-1} \subseteq R\phi, \quad [4, +\infty)$$