

$$\frac{1}{3} (1+2+\dots+9) + 9 + 10 = 10 + 9 = 19$$

$9+10=19$

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تابع خطی است. $\Rightarrow$

$a = 0$

$\begin{cases} 2b + c = 0 \Rightarrow b = 1 \\ 3b + c = 1 \Rightarrow c = -2 \end{cases}$

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$g(x) = \sqrt{x^2 + t}$

$x^2 + t \in \left[\min_{x \in \mathbb{R}} x^2 + t, \max_{x \in \mathbb{R}} x^2 + t \right] = [t, +\infty)$ $\Rightarrow R_g = [t, +\infty)$

$a = b = -2$

تابع نهاده $x = -2$ تعریف نمی شود پس:

$\frac{x^3 - tx}{x+2} \xrightarrow{x \neq -2} x^2 - 2x \left\{ \begin{array}{l} \max_{x \in \mathbb{R}} x^2 - 2x = +\infty \\ \min_{x \in \mathbb{R}} x^2 - 2x = -1 \end{array} \right. \Rightarrow C = -1$

$\frac{a+b}{2c} = \frac{-2-2}{-2} = 2 \quad f(2) = \frac{1-1}{2} = 0$

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تابع خطی است. $\Rightarrow$ زیرا درجه یک است.

$(x+c)^3 = x^3 + cx^2 + c^2x + c^3 = x^3 + ax^2 + bx + A$

$\Rightarrow c^3 = A \quad c^2 = b \quad \Rightarrow a = c = -2 \quad b = c^2 = 4$

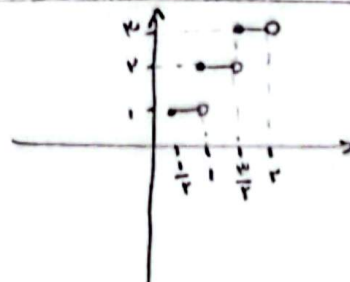
$y = x - 2 \quad [-2, 2] \quad R = [-4, 2]$

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$\frac{1}{2} \leq x < 1 \rightarrow y = 0 + 1 = 1$

$1 \leq x < \frac{3}{2} \rightarrow y = 1 + 1 = 2$

$\frac{3}{2} \leq x < 2 \rightarrow y = 1 + 2 = 3$



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