

$$\frac{(n-1)^2 - n^2}{n(n-1)} \geq 0 \rightarrow \frac{1 - 2n}{n(n-1)} \geq 0 \rightarrow \frac{1}{n-1} - \frac{2}{n} \geq 0$$

$$D = (-\infty, 0) \cup \left[\frac{1}{2}, 1\right)$$

$$D = \mathbb{R} - \left\{ \frac{1}{2}, 1 \right\} = \mathbb{R} - \left\{ -1, 0, \frac{1}{2}, 1 \right\}$$

$$\left[\left(\frac{1}{n} \right)^n - 1 \right] (n - \varepsilon^n) \geq 0 \rightarrow \frac{1}{n} - 1 \geq 0$$

$$D = (-\infty, \frac{1}{2}] \cup [1, +\infty)$$

$$n \geq 1 \rightarrow n \geq 1$$

$$\left. \begin{aligned} n - \sqrt{n-1} \geq 0 \\ n^2 \geq n-1 \rightarrow n \geq 1 \end{aligned} \right\} \Rightarrow 1 \leq n \leq 1.4$$

$$\text{I) } n^2 - n - 1 \geq 0 \rightarrow \frac{1}{n} - \frac{1}{n+1} \geq 0$$

$$\text{II) } n^2 - 1 \geq 0 \rightarrow \frac{1}{n} - \frac{1}{n+1} \geq 0$$

$$\text{I) } \cap \text{II) } \rightarrow D = (-\infty, -1) \cup [1, +\infty)$$

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

$$a + b = 1$$



~~$$m + a_2 - 2r \geq 0 \Rightarrow -2r - \frac{1}{r} m + r \geq - \rightarrow -(m+r)(n-\frac{r}{2})$$~~

$$-r \rightarrow r \rightarrow a \rightarrow -1 \rightarrow r_a \rightarrow 1 \rightarrow a \rightarrow \frac{1}{r}$$

Handwritten scribbles and a calculation: $9 \frac{1}{2} = \frac{19}{2}$

$$15. f(n) = n \rightarrow f(n) \geq n \text{ for } n \geq 1$$

$$\left. \begin{array}{l} n \geq 1 \rightarrow \sqrt{r_{n-1}} \rightarrow n \geq 1 \\ n \leq 1 \rightarrow \sqrt{r_{n+1}} \rightarrow \\ n \geq 1 \rightarrow 0 = r_{n+1} < 1 \end{array} \right\} U \rightarrow D = [-r, +\infty)$$

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8 9 10 11

(4)

$$\frac{g}{\rho} = \frac{v_{rms}^2}{r} \rightarrow \frac{14 \sqrt{r}}{r} \rightarrow \frac{14}{\sqrt{r}} \rightarrow \frac{14}{\sqrt{1.5 \times 10^6}} \rightarrow 1.1 \times 10^{-3} \text{ m/s}^2$$

$$G \cdot \pi = 1$$

$$- \frac{1}{r} \mid$$

A hand-drawn wavy line on a lined background. The line starts with a small hook on the left, rises to a peak, dips to a trough, rises to a higher peak, dips to a lower trough, rises to a third peak, and ends with a small hook on the right. The line is drawn with a dark pen or marker.

$$f(a) = \frac{a+1}{a-1} \rightarrow f(f(a)) = f\left(\frac{a+1}{a-1}\right) = \frac{\frac{a+1}{a-1} + 1}{\frac{a+1}{a-1} - 1} \quad (\checkmark)$$

$$\frac{a+1+a-1}{a-1} - 1$$

$$\frac{a-1}{a-1} = \frac{a}{1} = a \rightarrow \text{...} \rightarrow K = \{1\}$$

$$\frac{a+1-a+1}{a-1} \quad a = 1 \text{ ist } \rightarrow$$

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$$(I) \quad n^r \cdot \sin \theta + \xi = 0 \rightarrow (n-r)^r = 0 \rightarrow n = r \rightarrow g(a) = 1$$

$$(II) \quad \sqrt{n^r - 1} = 1 \rightarrow n^r - 1 = \xi \rightarrow n = \pm \sqrt{\xi} = \alpha$$

$$\text{or } (I, II) \quad a = \pm \sqrt{\xi}$$

$$f(n+r) = n^r - an + 4 = (n-r)/(n-r)$$

$$\downarrow \quad \frac{1}{t} \rightarrow f(t) = [t - 4]/[t - a]$$

$$f(\xi) = 1 \times f(-r) = \sqrt{r} = \underline{1 \xi \xi}$$

$$\xi \cos m + \omega \cos m = r, \omega$$

$$\left[\text{At } \frac{\omega}{n} \right], \quad \left(t + \frac{\omega}{n} \right)^r = \frac{n}{9\xi} \rightarrow t = \frac{\xi}{n} = \frac{1}{r} \checkmark$$

$$\cos m = \frac{1}{r} \rightarrow \tan m = \sqrt{r} \rightarrow \tan m = \frac{-1\xi}{n} \quad \checkmark$$