

$$\frac{1 \quad 3}{+ \phi - \phi +}$$

$$a'(n-2)(n-1) = n^2 - an + b \Rightarrow a' = 1$$

$$n^2 - 2n + 3 \Rightarrow a = 2 \checkmark, b = 3 \checkmark$$

$$a+b = 5 \checkmark$$

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ریشه متفاوت  $\rightarrow -1$   $-1 - 2n = 0 \Rightarrow n = -\frac{1}{2} \checkmark$

$$k-2 < 0 \quad k \in \mathbb{N} \Rightarrow k = 1 \checkmark$$

$$\left( (k-2)2^{4m-1} \right) \quad \text{ریشه}$$

$$-2^2 + m - 1 = 0$$

$$m = 5 \checkmark$$

$$\frac{m}{n} + k = \frac{5}{-\frac{1}{2}} + 1 = -14 \checkmark$$

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$$-\frac{1}{2}n^2 + 2n + 4 > \frac{5}{2} \Rightarrow -\frac{1}{2}n^2 + 2n + 4 - \frac{5}{2} > 0 \Rightarrow -n^2 + 4n + 5 > 0$$

$$-(n^2 - 4n - 5) > 0$$

$$\frac{-1 \quad 5}{+ \phi - \phi +}$$

$$(a, b) = (-1, 5) \checkmark \quad b-a = 5 - (-1) = 6 \checkmark$$

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$$\frac{n^2 - 2n^2 - n + 3}{n^2 - n^2} \left| \frac{n-1}{n^2 - 2n - 3} \right.$$

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$$\frac{-2n^2 - n + 3}{-2n^2 + 2n}$$

$$\rightarrow (n-3)(n+1)$$

$$f(2) = 1 - \frac{12}{2} - 2 + 3 = -4 \checkmark$$

$$\frac{-2n + 3}{-2n + 2}$$

$$\frac{-1 \quad 1 \quad 3}{- \phi + \phi - \phi +} \quad \frac{n+1}{2} = 2$$

$$n > 0 \quad (1, 3) \checkmark$$

(۱, ۷, ۵)

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$$a-1 < 0 \Rightarrow a < 1 \quad (-\infty, 1)$$

$$\Delta < 0 \Rightarrow (a-1)^2 - 4(a-1) < 0 \quad (a-1)(a-1-4) < 0$$

$$\frac{1 \quad 0}{+ \phi - \phi +}$$

$$(1, 0) \quad (-\infty, 1) \cap (1, 0) = \emptyset \checkmark$$

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$$\frac{m(m^2+m)}{m-2} > 0 \quad \frac{m^2(m^2+1)}{m-2} > 0 \quad \text{اعتماد}$$

مستقیم

$$\frac{+ \phi - \phi +}{-}$$

$$(\infty, 0) \cup (2, \infty) \checkmark$$

1, 5

6

$$\frac{(n-3)(n+2)(n-1)^2}{(n^2+n+1)(n-n)^2} \leq 0$$

اعتماد

$$[-2, 2) \cup [3, +\infty)$$

$$\frac{-2 \quad 1^2 \quad 2 \quad 3}{+ \phi - \phi - \phi + \phi -} \quad (-\infty, -2] \cup \{1\} \cup (2, 3] \checkmark$$

1, 7, 8

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$$\frac{2n^2-2n}{n^2+4} < 2 \Rightarrow \frac{2n^2-2n-2n^2-1}{n^2+4} < 0 \Rightarrow \frac{n^2-2n-1}{n^2+4} < 0$$

اعتماد مثبت

$$\frac{-2 \quad 4}{+ \phi - \phi +}$$

$$(a, b) = (-2, 4) \checkmark$$

$$b-a = 4 - (-2) = 6 \checkmark$$

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$$1 < \frac{2n^2-4n}{n+1} \Rightarrow \frac{(2n^2+n+1-4n)}{n+1} > 0 \quad \text{اعتماد مثبت} \quad \frac{-1}{-\phi +} \quad (-1, +\infty)$$

$$\frac{2n^2-4n}{n+1} < 0 \Rightarrow \frac{n(2n-4)}{n+1} < 0 \quad \frac{-1 \quad 0 \quad 2}{-\phi + \phi - \phi +} \quad (-\infty, -1) \cup (0, \frac{2}{1})$$

$$(-1, +\infty) \cap [(-\infty, -1) \cup (0, \frac{2}{1})] = (0, \frac{2}{1}) \checkmark$$

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$$\frac{n^2-10-2n}{n} \leq 0 \Rightarrow \frac{(n-10)(n+2)}{n} \leq 0$$

$$\frac{-2 \quad 0 \quad 10}{-\phi + \phi - \phi +}$$

$$(-\infty, -2] \cup (0, 10] \checkmark$$

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