

الاجابة النموذجية للاختبار

السؤال الأول

(1) كما ن (u) = 1
u ← -

(2) كما ن (u-3) = 1
u ← - + 1

نفرض u = 3 - u

عندما u ← - + 1 فإن u ← - 2

كما ن (u) = 0
u ← - 2

(3) كما ن (u-1) = 2 ⇒ u ∈ (2, 3), {1}

(4) كما ن (u) غير موجودة ⇒ u = 0 = {1, 2, 3, 4, 5, 6, 7}

(5) كما ن (u) (u+1) + (u-1) + (u-2) = 3
u ← - 3

كما ن (u) (u+1) + (u-1) + (u-2) = 3
u ← - 3

كما ن (u) (u+1) + (u-1) + (u-2) = 3
u ← - 3

نفرض u = 1 + u

عندما u ← - 3 فإن u ← - 2

كما ن (u) = 2
u ← - 2

كما ن (u) (u) + (u-1) + (u-2) = 3
u ← - 3

3 + 2 - 1 = 11 - 2

السؤال الثاني:

11) $\gamma = 7 \rightarrow (7, 2) \leftarrow \gamma = 7$
 $\gamma = 7 \leftarrow \gamma = 7$

12) $\gamma = 7 \leftarrow \gamma = 7$

$\gamma = 7 \leftarrow \gamma = 7$

13) $\gamma = 7 \leftarrow \gamma = 7$

$\gamma = 7 \leftarrow \gamma = 7$

المطلوب $\gamma = 7 \leftarrow \gamma = 7$

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14) $\gamma = 7 \leftarrow \gamma = 7$

بما أنه النهاية موجودة والنتيجة فيه النظام = 0

$\gamma = 7 \leftarrow \gamma = 7$

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$\gamma = 7 \leftarrow \gamma = 7$

$\gamma = 7 \leftarrow \gamma = 7$

$\gamma = 7 \leftarrow \gamma = 7$

$\gamma = 7 \leftarrow \gamma = 7$

$$(2) \quad 5 = (u) \quad 5 + u + v + p = (u) \quad (2)$$

$$\textcircled{1} \quad 7 = 5 + u + v + p \quad \leftarrow \quad 7 = (u) \quad (2)$$

ربما انه انكشافه صوابه وليتقن فيه القام =

$$\textcircled{2} \quad 3 = (u) \quad \leftarrow \quad 3 = (u) \quad (2)$$

$$\textcircled{3} \quad 4 = 5 + u + v + p \quad \leftarrow \quad 4 = 5 + u + v + p$$

$$1 = \frac{4 - 5 + u + v + p}{1 - u} \quad \leftarrow \quad 1 = \frac{4 - 5 + u + v + p}{1 - u}$$

$$1 = \frac{(4 - 5) - u + p + v}{(1 - u)} \quad \leftarrow \quad 1 = \frac{(4 - 5) - u + p + v}{(1 - u)}$$

$$\textcircled{4} \quad 1 = 3 + u - p \quad \leftarrow \quad 1 = 3 + u - p$$

جمع المعادلتين (4), (3)

$$\textcircled{5} \quad 4 = u + p \quad \leftarrow \quad 4 = u + p$$

طرح المعادلتين (5) - (1)

$$\textcircled{6} \quad 4 = u + p \quad \leftarrow \quad 4 = u + p$$

طرح المعادلتين (6) - (5)

$$\boxed{4 = u + p} \quad \boxed{4 = u + p} \quad \boxed{1 = p}$$

"كثير حدود من الدرجة الثانية"

$$5 = (u) \quad 5 + u + v + p = (u) \quad \leftarrow \quad 5 = (u)$$

السؤال الثالث -

$$\frac{7}{x-5} - \frac{\sqrt{5+x}}{x-5} \quad \leftarrow \quad \frac{7}{x-5} - \frac{\sqrt{5+x}}{x-5}$$

$$\frac{7 - \sqrt{5+x}}{x-5} \quad \leftarrow \quad \frac{7 - \sqrt{5+x}}{x-5}$$

$$\frac{7 + \sqrt{5+x}}{7 + \sqrt{5+x}} \times \frac{7 - \sqrt{5+x}}{x-5} \quad \leftarrow \quad \frac{7 + \sqrt{5+x}}{7 + \sqrt{5+x}} \times \frac{7 - \sqrt{5+x}}{x-5}$$

$$\frac{1}{7 + \sqrt{5+x}} \times \frac{9 - 5 - x}{(x-5)} \quad \leftarrow \quad \frac{1}{7 + \sqrt{5+x}} \times \frac{4 - x}{(x-5)}$$

$$\begin{bmatrix} 5 \\ 7 \end{bmatrix} = \frac{1}{(3 + \sqrt{5+4})} \times \frac{(5-3)s}{(5-3)} \begin{matrix} \text{Ls} \\ \leftarrow \end{matrix} \leftarrow \frac{1}{3 + \sqrt{5+4}} \times \frac{2-4s}{1-s} \begin{matrix} \text{Ls} \\ \leftarrow \end{matrix}$$

توحيد الكسرات

$$\frac{3 - \frac{7}{2-4s}}{1-s} \begin{matrix} \text{Ls} \\ \leftarrow \end{matrix}$$

$$\frac{1}{1-s} \times \frac{(2-4s)3 - 7}{2-4s} \begin{matrix} \text{Ls} \\ \leftarrow \end{matrix}$$

$$\frac{1}{1-s} \times \frac{6-12-11}{2-4s} \begin{matrix} \text{Ls} \\ \leftarrow \end{matrix} \leftarrow \frac{1}{1-s} \times \frac{12+6-11}{2-4s} \begin{matrix} \text{Ls} \\ \leftarrow \end{matrix}$$

$$\begin{bmatrix} 9 \\ 5 \end{bmatrix} = \frac{1}{(5-3)} \times \frac{(5-3)9}{5-3} \begin{matrix} \text{Ls} \\ \leftarrow \end{matrix}$$

$$\begin{bmatrix} 9 \\ 7 \end{bmatrix} \leftarrow \frac{9-s}{1-s} - \frac{s}{1-s}$$

$$\frac{s^2 - s^2}{s^2 - s(1+4s) + s^2(1+4s)} \begin{matrix} \text{Ls} \\ \leftarrow \end{matrix} (s)$$

$$\frac{(5+1+4s)(5-1+4s)}{(9+(1+4s)3+s^2(1+4s))(3-1+4s)} \begin{matrix} \text{Ls} \\ \leftarrow \end{matrix}$$

$$\frac{(7+4s)(2-4s)}{(9+(1+4s)3+s^2(1+4s))(2-4s)} \begin{matrix} \text{Ls} \\ \leftarrow \end{matrix}$$

$$\begin{bmatrix} 5 \\ 5 \end{bmatrix} = \frac{1 \times 5}{1s} = \frac{(7+4s)(2-4s)s}{(9+(1+4s)3+s^2(1+4s))(2-4s)} \begin{matrix} \text{Ls} \\ \leftarrow \end{matrix}$$

لصحة على s-5 وتوزيع السطوح

$$\frac{12-4s}{11-4s+\sqrt{5+4}} \begin{matrix} \text{Ls} \\ \leftarrow \end{matrix} (3)$$

$$\frac{(2-4s)4}{2-4s} \begin{matrix} \text{Ls} \\ \leftarrow \end{matrix}$$

$$\frac{3}{4} = \frac{11-4s+\sqrt{5+4}}{2-4s} \begin{matrix} \text{Ls} \\ \leftarrow \end{matrix}$$

د

$$\frac{1-u-r}{2-u} \cdot \frac{1}{s} + \frac{r-\sqrt{u+u}}{2-u} \cdot \frac{1}{s} = r$$

$$\frac{r+\sqrt{u+u}}{r+\sqrt{u+u}} \times \frac{r-\sqrt{u+u}}{2-u} \cdot \frac{1}{s} = r$$

$$\frac{1}{r} = \frac{(r-\sqrt{u+u})}{(r+\sqrt{u+u})(2-u)} \cdot \frac{1}{s}$$

$$\frac{1}{r} = \frac{(2-u)r}{(2-u)(r+\sqrt{u+u})} \cdot \frac{1}{s}$$

$$\frac{1}{r} = r + \frac{1}{r} = r$$

$$\frac{1}{r} = \frac{1}{r} \times \frac{1}{1} = \frac{1}{r}$$

$$\frac{r+\sqrt{u+u}-u-r}{u-r} \cdot \frac{1}{s} \quad (2)$$

$$\frac{(r-\sqrt{u+u})(r-\sqrt{u+u})}{(u-r)(r+\sqrt{u+u})} \cdot \frac{1}{s}$$

$$\frac{1}{r} = \frac{1}{r} =$$

نوعیه الكفالات

$$\left(1 - \frac{1}{r(1+u)}\right) \times \frac{1}{(1+u)} \cdot \frac{1}{s} \quad (5)$$

$$\frac{(1+u)-1}{r(1+u)} \times \frac{1}{(1+u)} \cdot \frac{1}{s}$$

$$\frac{(1+u+1)((1+u)-1)}{r(1+u)} \times \frac{1}{(1+u)} \cdot \frac{1}{s}$$

$$\frac{1}{r} = \frac{1}{r} = \frac{(u+r)u}{r(1+u)} \times \frac{1}{(1+u)} \cdot \frac{1}{s}$$

7

$$\frac{1 - \frac{u}{q} - \frac{(r+u)}{q}}{q - \frac{(r+u)}{q}} \quad \text{با } \frac{1}{q}$$

$$\frac{1 - \frac{u}{q} - \frac{(r+u)}{q}}{q - \frac{(r+u)}{q}} \quad \text{با } \frac{1}{q}$$

$$\frac{1 - \frac{u}{q} - \frac{(r+u)}{q}}{q - \frac{(r+u)}{q}} \quad \text{با } \frac{1}{q}$$

نفره $\frac{u}{q} = \text{عندما } \frac{1}{q}$ $\frac{u}{q}$ $\frac{1}{q}$

$$\frac{1 - \frac{u}{q} - \frac{(r+u)}{q}}{q - \frac{(r+u)}{q}} \quad \text{با } \frac{1}{q}$$

$$\boxed{1} = \frac{1}{q} = \frac{(1 + \frac{u}{q}) - (\frac{u}{q})}{(\frac{u}{q})} \quad \text{با } \frac{1}{q}$$

$r = u$ حول $u - 1 = |1 - u - r|$

$r = u$ حول $u - 3 = |u - 3|$

$$\frac{r + |1 - u - r|}{1 - |u - 3|} \quad \text{با } \frac{1}{q}$$

$$\frac{r + (u - 1)u}{1 - u - 3} \quad \text{با } \frac{1}{q}$$

$$\frac{r + u - u}{u - u - 3} \quad \text{با } \frac{1}{q}$$

$$\boxed{1} = \frac{1}{q} = \frac{(1 + \frac{u}{q}) - (\frac{u}{q})}{(\frac{u}{q})} \quad \text{با } \frac{1}{q}$$

$$\left(\frac{1}{r - \sqrt{r+u}} - 1 \right) \times \frac{1}{r - \sqrt{r+u} - r + u} \quad \text{با } \frac{1}{q}$$

$\frac{1}{q} = 1$ $\frac{1}{q} = 1$

$r = u$ حول $u - 3 = |3 - u - 1|$

بجوابه (لغات)

$$\left(\frac{1}{r - \sqrt{r+u}} - 1 \right) \times \frac{1}{r - \sqrt{r+u} - r + u} \quad \text{با } \frac{1}{q}$$

$$\frac{r + \sqrt{r+u}}{r + \sqrt{r+u} + r} \times \frac{1 - u - 3}{r - \sqrt{r+u}} \times \frac{1}{r - \sqrt{r+u} - r + u} \quad \text{با } \frac{1}{q}$$

$$\boxed{2} = \frac{1}{q} = \frac{(r + \sqrt{r+u})(u - 3)}{(u - 3)(r - \sqrt{r+u})} \quad \text{با } \frac{1}{q}$$

ص ٧

السؤال الرابع

$$(1) \quad [u] = u \iff u = 1$$



$$[u] = [u] \iff u = 1$$

$$[u - u] = u - u = 0$$

$$u = (u - u) = 0$$

$$u = 1, u = 1$$

$$\begin{array}{r} u - u \\ + + + + + \\ + + + + + \end{array}$$

$$[u - u] = u - u = 0, u > u > u$$

$$\left. \begin{array}{l} u < u, \quad u + u \\ u = u, \quad u \\ u > u, \quad u + u \end{array} \right\} = (u)$$

$$\boxed{11} = \begin{array}{r} u + u \\ + + + + + \\ + + + + + \end{array} = (u)$$

$$\begin{array}{r} u + u \\ + + + + + \\ + + + + + \end{array} = (u)$$

$$\begin{array}{r} (u + u) \\ + + + + + \\ (u + u) \end{array} =$$

$$\boxed{12} =$$

ii) (u) غير موجودة

نقطه

(۱) $[u] = u = 1, u = 1, u = 1$



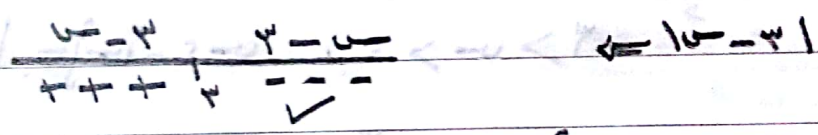
$[u] = u, u > 1, u > 2, u > 3$

$[u-2] = u-2, u-2 = 1, u-2 = 1$



$[u-2] = u-2, u-2 = 1, u-2 = 1, u-2 = 1$

$u(u) = (u) = \begin{cases} (u-2) & u > 2 \\ u & u < 2 \end{cases}$



$u(u) = (u) = \begin{cases} (u-2) & u > 2 \\ u & u < 2 \end{cases}$

بنابر آنکه $u(u)$ صاف است

$u(u) = (u) = \begin{cases} u & u < 2 \\ (u-2) & u > 2 \end{cases}$

$u(u) = (u) = \begin{cases} u & u < 2 \\ (u-2) & u > 2 \end{cases}$

با فرض $u(u)$

$u(u) = (u) = \begin{cases} u & u < 2 \\ (u-2) & u > 2 \end{cases}$

$u(u) = (u) = \begin{cases} u & u < 2 \\ (u-2) & u > 2 \end{cases}$

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$u(u) = (u) = \begin{cases} u & u < 2 \\ (u-2) & u > 2 \end{cases}$

السؤال الثاني

$$1. = \frac{2 - (u-2)}{3-u} \quad \text{كفا } \begin{matrix} 2 \\ 3-u \end{matrix}$$

لما اننا انصاية موجودة، لتعويضه فيه المقام =

$$1. = \frac{2 - (u-2)}{3-u} \quad \text{كفا } \begin{matrix} 2 \\ 3-u \end{matrix}$$

$$11) \left(\frac{2 - (u-2)}{3-u} \right) + \frac{2 - (u-2)}{3-u} - \frac{2 - (u-2)}{3-u}$$

$$\boxed{22} = 9 - 27 + 2$$

ب. لتقسيم على 2 - u وتوزيع لنهاية

$$\frac{2 - (u-2)}{3-u} \quad \text{كفا } \begin{matrix} 2 \\ 3-u \end{matrix}$$

$$\frac{2 - (u-2)}{3-u} \quad \text{كفا } \begin{matrix} 2 \\ 3-u \end{matrix}$$

$$\frac{2 - (u-2)}{3-u} \quad \text{كفا } \begin{matrix} 2 \\ 3-u \end{matrix}$$

$$\frac{11}{1.} = \frac{(1. + u - 2)(2 - u)}{(3-u) \cdot 2}$$

جذبه واجنانه 3(u-2)

$$\frac{2 - (u-2)}{3-u} \quad \text{كفا } \begin{matrix} 2 \\ 3-u \end{matrix}$$

$$\frac{2 - (u-2)}{3-u} \quad \text{كفا } \begin{matrix} 2 \\ 3-u \end{matrix}$$

$$\frac{2 - (u-2)}{3-u} \quad \text{كفا } \begin{matrix} 2 \\ 3-u \end{matrix}$$

$$\frac{2 - (u-2)}{3-u} \quad \text{كفا } \begin{matrix} 2 \\ 3-u \end{matrix}$$

$$\boxed{19} = \frac{21}{2} = 1. \times \frac{21}{2} + 2$$

ج

المسألة على ص ٢ وتوزيع لكافة

$$\frac{10 - u \Delta}{2 + u \sqrt{2} - \sqrt{2 + (u) \Delta}} \quad \text{كأ (٤)}$$

$$\frac{10 - \cancel{u \Delta}}{\cancel{2} + u \sqrt{2} - \sqrt{2 + (u) \Delta}} \quad \text{كأ}$$

$$\frac{2 + u \sqrt{2} - \sqrt{2 + (u) \Delta}}{2 - u} \quad \text{كأ}$$

$$\frac{7 - 4 \sqrt{2}}{2 - \sqrt{2}} \quad \text{كأ} = \frac{2 - \sqrt{2 + (u) \Delta}}{2 - u} \quad \text{كأ}$$

$$\frac{2 + \sqrt{2 + (u) \Delta}}{2 + \sqrt{2 + (u) \Delta}} \times \frac{2 - \sqrt{2 + (u) \Delta}}{2 - u} \quad \text{كأ} \quad \leftarrow \text{١٣}$$

$$\frac{1}{2 + \sqrt{2 + (u) \Delta}} \times \frac{2 - \sqrt{2 + (u) \Delta}}{(2 - u)} \quad \text{كأ}$$

$$\boxed{\frac{1}{2}} = \frac{1}{2} \times 1 = \frac{1}{2 + \sqrt{2 + (u) \Delta}} \times \frac{2 - \sqrt{2 + (u) \Delta}}{2 - u} \quad \text{كأ}$$

$$\boxed{2} = \frac{(2 - \sqrt{2 + (u) \Delta})}{(2 + \sqrt{2 + (u) \Delta})} \quad \text{كأ} \quad \leftarrow \text{١٤}$$

الجواب النهائي = $\frac{10}{2} = \frac{5}{1} = \frac{5}{2 - \frac{1}{2}} = \frac{10}{2 - \frac{1}{2}}$

المسألة على ص ٣ وتوزيع لكافة

$$\frac{12 - u \sqrt{2} + (u) \Delta}{2 + u \sqrt{2} - \sqrt{2 + (u) \Delta}} \quad \text{كأ (٥)}$$

$$\frac{9 - u \sqrt{2}}{2 - u} \quad \text{كأ} + \frac{2 - \sqrt{2 + (u) \Delta}}{2 - u} \quad \text{كأ} = \frac{12 - u \sqrt{2} + (u) \Delta}{2 - u} \quad \text{كأ}$$

$$\frac{(1 - u) \sqrt{2 + (u) \Delta}}{(2 - u)} \quad \text{كأ} = \frac{2 + u \sqrt{2} - \sqrt{2 + (u) \Delta}}{2 - u} \quad \text{كأ}$$

$$\frac{(2 - u) \sqrt{2} + 2 - \sqrt{2 + (u) \Delta}}{2 - u} \quad \text{كأ} =$$

$$\boxed{\frac{2 \sqrt{2}}{2}} = \frac{2 + 1 \times \sqrt{2}}{2} = \frac{2 + \sqrt{2}}{2}$$

حل

$$\frac{2}{(x-5)(x-3)} = \frac{A}{x-5} + \frac{B}{x-3}$$

بموجب (القانون الثاني)

$$\frac{2}{(x-5)(x-3)} = \frac{A(x-3) + B(x-5)}{(x-5)(x-3)}$$

$$\frac{2}{(x-5)(x-3)} = \frac{Ax - 3A + Bx - 5B}{(x-5)(x-3)}$$

$$\frac{2}{(x-5)(x-3)} = \frac{(A+B)x - (3A+5B)}{(x-5)(x-3)}$$

$$\frac{2}{(x-5)(x-3)} = \frac{(A+B)x - (3A+5B)}{(x-5)(x-3)}$$

$$\frac{2}{x} = (A+B) \times \frac{1}{x} - (3A+5B)$$

السؤال السادس
 (11) من كثير حدود باجه مستويين 5-5 يساوي 5 ← كما ان (5) = 5

$$5 = 3 \times \frac{1}{x} + \frac{5}{x}$$

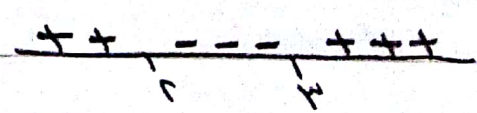
$$\frac{5}{x} = 17 + 5 \times \frac{1}{x}$$

$$(12) \frac{2}{x^2-5x+6} = \frac{A}{x-2} + \frac{B}{x-3}$$

$$0 = 6 + 5 - 2$$

$$= (3-0)(2-0)$$

$$3 = 0, 2 = 0$$



∴ (2, 3), (3, 2)

بما ان r كافيه (s) موجوده فانه

$$\text{كافيه } (s) = \text{كافيه } (s) + r$$

$$\text{كافيه } [1+r] = \text{كافيه } [s] - 9$$

$$\text{كافيه } [s] + 1 = \text{كافيه } [s] - 9$$

$$[s] - 9 = 1 + [s]$$

$$r = [s]$$

$$s = [s]$$

او $(3, 0)$.

$$s > 0 > 5$$