

النموذج (د)

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(أ) $\frac{3\pi}{4}$



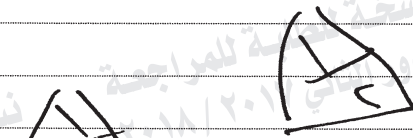
(ب) $\frac{3\pi}{4}$



ح = $\frac{3\pi}{4}$: $\frac{3\pi}{4} = \frac{3\pi}{4}$

$\frac{3\pi}{4} = \frac{3\pi}{4}$: $\frac{3\pi}{4} = \frac{3\pi}{4}$

ترتيب اكد الارض هو $\frac{1}{2} + 1 = 1.5$



$\frac{3\pi}{4} = \frac{3\pi}{4}$: $\frac{3\pi}{4} = \frac{3\pi}{4}$



$\frac{3\pi}{4} = \frac{3\pi}{4}$: $\frac{3\pi}{4} = \frac{3\pi}{4}$

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المسئبان متوازيان \therefore لهما نفس الاتجاه

المسئب المسمى هو $(٢, ٤, ٦, ٣)$

$\vec{r} = (-٢, ٣, ٥) + (٢, ٤, ٦)$ = الصورة المتجهية

المعادلات البارامترية $\left\{ \begin{array}{l} x = ٢ - ٢t \\ y = ٣ + ٤t \\ z = ٥ + ٦t \end{array} \right.$

المعادلة الإحداثية $\frac{x-٢}{-٢} = \frac{y-٣}{٤} = \frac{z-٥}{٦}$

(تراعى الحلول الأخرى)

$$\begin{pmatrix} 0 \\ 0 \\ 1 \end{pmatrix} = \begin{pmatrix} 5 \\ 3 \\ 2 \end{pmatrix} \begin{pmatrix} 1 & 2 & 1 \\ 2 & 1 & 1 \\ 1 & 1 & 1 \end{pmatrix} \dots$$

$$\Delta \begin{pmatrix} 1 & 2 & 1 \\ 2 & 1 & 1 \\ 1 & 1 & 1 \end{pmatrix} = 1 \cdot \begin{vmatrix} 2 & 1 \\ 1 & 1 \end{vmatrix} - 2 \cdot \begin{vmatrix} 2 & 1 \\ 1 & 1 \end{vmatrix} + 1 \cdot \begin{vmatrix} 2 & 1 \\ 2 & 1 \end{vmatrix} = 1 \cdot (2 \cdot 1 - 1 \cdot 1) - 2 \cdot (2 \cdot 1 - 1 \cdot 1) + 1 \cdot (2 \cdot 1 - 2 \cdot 1) = 1 \cdot (2 - 1) - 2 \cdot (2 - 1) + 1 \cdot (2 - 2) = 1 - 2 + 0 = -1$$

$$\Delta \begin{pmatrix} 2 & 1 & 1 \\ 1 & 1 & 1 \\ 1 & 1 & 1 \end{pmatrix} = \Delta \begin{pmatrix} 2 & 1 & 1 \\ 1 & 1 & 1 \\ 1 & 1 & 1 \end{pmatrix} = 2 \cdot \begin{vmatrix} 1 & 1 \\ 1 & 1 \end{vmatrix} - 1 \cdot \begin{vmatrix} 2 & 1 \\ 1 & 1 \end{vmatrix} + 1 \cdot \begin{vmatrix} 2 & 1 \\ 2 & 1 \end{vmatrix} = 2 \cdot (1 \cdot 1 - 1 \cdot 1) - 1 \cdot (2 \cdot 1 - 1 \cdot 1) + 1 \cdot (2 \cdot 1 - 2 \cdot 1) = 2 \cdot (1 - 1) - 1 \cdot (2 - 1) + 1 \cdot (2 - 2) = 2 \cdot 0 - 1 \cdot 1 + 1 \cdot 0 = -1$$

$$\Delta \begin{pmatrix} 1 & 2 & 1 \\ 2 & 1 & 1 \\ 1 & 1 & 1 \end{pmatrix} = 1 \cdot \begin{vmatrix} 2 & 1 \\ 1 & 1 \end{vmatrix} - 2 \cdot \begin{vmatrix} 2 & 1 \\ 1 & 1 \end{vmatrix} + 1 \cdot \begin{vmatrix} 2 & 1 \\ 2 & 1 \end{vmatrix} = 1 \cdot (2 \cdot 1 - 1 \cdot 1) - 2 \cdot (2 \cdot 1 - 1 \cdot 1) + 1 \cdot (2 \cdot 1 - 2 \cdot 1) = 1 \cdot (2 - 1) - 2 \cdot (2 - 1) + 1 \cdot (2 - 2) = 1 - 2 + 0 = -1$$

$$\begin{pmatrix} 0 \\ 0 \\ 1 \end{pmatrix} \begin{pmatrix} 2 & 1 & 1 \\ 1 & 1 & 1 \\ 1 & 1 & 1 \end{pmatrix} \frac{1}{-1} = \begin{pmatrix} 5 \\ 3 \\ 2 \end{pmatrix} \dots$$

$$\Delta \begin{pmatrix} 2 & 1 & 1 \\ 1 & 1 & 1 \\ 1 & 1 & 1 \end{pmatrix} = \Delta \begin{pmatrix} 2 & 1 & 1 \\ 1 & 1 & 1 \\ 1 & 1 & 1 \end{pmatrix} \frac{1}{-1} = \dots$$

$$2 = 5 \quad 1 = 3 \quad 1 = 2$$

(تراجعى الحلول الأخرى)

نموذج إجابة مادة الجبر والهندسة الفراغية شهادة إتمام الدراسة الثانوية العامة - الدور الثاني - العام الدراسي ٢٠١٧/٢٠١٨

النموذج (د)

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$$(١) \quad x^2 + x^3 + x^4$$

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$$(١) \quad 1$$

-١٠

$$(١) \quad (٢, ٦, ١, ٣) \quad (٤)$$

- ١١

$$(١٦) \quad \frac{(٣٧+١)١٦}{٣+١} = \frac{٣٧+١}{٣٧+١} \times \frac{١٦}{٣٧-١} = ع$$

$$ع = ٤ + ٤ = ٨ \quad \therefore ٣٧ + ١ = ٤ \times ٨ = ٣٢ + ١ = ٣٣$$

$$\frac{\pi}{٣} = \theta \quad \therefore ٣٧ = \theta$$



$$\therefore ع = ٨ \left[\frac{\pi}{٣} \cos \theta + \frac{\pi}{٣} \sin \theta \right]$$



$$\therefore ٨ \left[\frac{\pi}{٣} \cos \theta + \frac{\pi}{٣} \sin \theta \right] = ٨ \left[\frac{\pi}{٣} \cos \frac{\pi}{٣} + \frac{\pi}{٣} \sin \frac{\pi}{٣} \right]$$



$$\therefore ٨ \left[\frac{\pi}{٣} \cos \frac{\pi}{٣} + \frac{\pi}{٣} \sin \frac{\pi}{٣} \right] = ٨ \left[\frac{\pi}{٣} \cos \frac{\pi}{٣} + \frac{\pi}{٣} \sin \frac{\pi}{٣} \right]$$



$$\therefore ٨ \left[\frac{\pi}{٣} \cos \frac{\pi}{٣} + \frac{\pi}{٣} \sin \frac{\pi}{٣} \right] = ٨ \left[\frac{\pi}{٣} \cos \frac{\pi}{٣} + \frac{\pi}{٣} \sin \frac{\pi}{٣} \right]$$



$$\therefore ٨ \left[\frac{\pi}{٣} \cos \frac{\pi}{٣} + \frac{\pi}{٣} \sin \frac{\pi}{٣} \right] = ٨ \left[\frac{\pi}{٣} \cos \frac{\pi}{٣} + \frac{\pi}{٣} \sin \frac{\pi}{٣} \right]$$

$$(١٥) \quad \frac{(١٠+١)(\omega+\omega)}{٣-١} = \frac{\omega(١٠+\omega)}{\omega(٣-١)}$$



$$\frac{١٠-١}{٣} = \frac{١٠-١}{٣+١}$$



$$\therefore \frac{١٠-١}{٣} = \frac{١٠-١}{٣+١} \Rightarrow \frac{١٠-١}{٣} = \frac{١٠-١}{٣+١}$$



$$\therefore \frac{١٠-١}{٣} = \frac{١٠-١}{٣+١} \Rightarrow \frac{١٠-١}{٣} = \frac{١٠-١}{٣+١}$$

(تراجعى الحلول الأخرى)

النموذج (د)

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(ح) $r > 5$

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(ج) $1 < 1$

-١٤

(د) $1 < 1$

-١٥

(م) $\vec{r} = (3 - 6, 1 - 1, 2 - 3) = (-3, 0, -1)$

$\vec{c} = (2, 3, 1)$

(ج) $\vec{r} \cdot \vec{c} = (-3) \cdot 2 + 0 \cdot 3 + (-1) \cdot 1 = -6 - 1 = -7$

$(-3, 0, -1) \cdot (2, 3, 1) = -6 - 1 = -7$

$\therefore m = 1 - 2 = -1, n = 3 - 1 = 2, k = 2 - 3 = -1$

$\vec{r} = (-3, 0, -1)$

$\vec{r} \cdot \vec{c} = (-3) \cdot 2 + 0 \cdot 3 + (-1) \cdot 1 = -6 - 1 = -7$

(د) $\vec{r} \cdot \vec{c} = 0$

$(-3, 0, -1) \cdot (2, 3, 1) = -6 - 1 = -7$

$-7 = -7$

$\vec{r} \cdot \vec{c} = (-3) \cdot 2 + 0 \cdot 3 + (-1) \cdot 1 = -6 - 1 = -7$

$$(u) \quad \vec{P} = (3, 4, 3) \quad \vec{Q} = (3, 4, 3)$$

$$\vec{R} = (0, 4, -1) \quad \vec{S} = (0, 4, -1)$$

$$\vec{P} = \vec{Q}, \quad \vec{R} = \vec{S}$$

∴ \vec{P} و \vec{Q} متوازيان \vec{R} و \vec{S}

$$\vec{P} \times \vec{Q} = \begin{vmatrix} \vec{i} & \vec{j} & \vec{k} \\ 3 & 4 & 3 \\ 3 & 4 & 3 \end{vmatrix} = \vec{0}$$

$$\vec{R} \times \vec{S} = \begin{vmatrix} \vec{i} & \vec{j} & \vec{k} \\ 0 & 4 & -1 \\ 0 & 4 & -1 \end{vmatrix} = \vec{0}$$

$$(ii) \quad \vec{P} \times \vec{R} = \begin{vmatrix} \vec{i} & \vec{j} & \vec{k} \\ 3 & 4 & 3 \\ 0 & 4 & -1 \end{vmatrix} = \vec{i}(4 \cdot (-1) - 3 \cdot 16) - \vec{j}(3 \cdot (-1) - 0) + \vec{k}(12 - 0) = -13\vec{i} - 3\vec{j} + 12\vec{k}$$

$$\|\vec{P} \times \vec{R}\| = \sqrt{169 + 9 + 144} = \sqrt{322}$$

$$(iii) \quad \text{مجموع الزوايا المحورية} = \frac{\vec{P} \times \vec{Q}}{\|\vec{P} \times \vec{Q}\|} = \frac{\vec{0}}{0} = \text{غير معرف}$$

$$\vec{R} \times \vec{S} = \begin{vmatrix} \vec{i} & \vec{j} & \vec{k} \\ 0 & 4 & -1 \\ 0 & 4 & -1 \end{vmatrix} = \vec{0}$$

$$\left(\frac{0}{\sqrt{322}}, \frac{0}{\sqrt{322}}, \frac{0}{\sqrt{322}} \right) = (0, 0, 0)$$

(تراجعى الحلول الأخرى)

نموذج إجابة مادة الجبر والهندسة الفراغية لشهادة إتمام الدراسة الثانوية العامة - الدور الثاني - العام الدراسي ٢٠١٧/٢٠١٨

النموذج (د)

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(٥) - ١٠

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(٤) ١٣

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(٤) ٢

$$\begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix} = \Delta = 5 \cdot 5 \cdot 5 + 6 \cdot 6 \cdot 6 + 7 \cdot 7 \cdot 7 - 5 \cdot 6 \cdot 7 - 6 \cdot 7 \cdot 5 - 7 \cdot 5 \cdot 6$$

$$\therefore \begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix} = \begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix} - \begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix} - \begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix} + \begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix}$$

$$\begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix} = \begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix} - \begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix} + \begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix} - \begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix}$$

$$\begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix} = \begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix} - \begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix} + \begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix} - \begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix}$$

$$\begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix} = \begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix} - \begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix} + \begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix} - \begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix}$$

$$\begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix} = \begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix} - \begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix} + \begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix} - \begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix}$$

$$\begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix} = \begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix} - \begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix} + \begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix} - \begin{vmatrix} 5 & 3 & 4 & 5 \\ 5 & 4 & 5 & 6 \\ 6 & 5 & 6 & 7 \end{vmatrix}$$

$$\therefore \Delta = (5+3+4)(5-4)(5-6) = 12 \cdot 1 \cdot (-1) = -12$$

(تراعى الحلول الأخرى)

(انتهت الإجابة وتراعى الحلول الأخرى)