

$$m^2 = 9$$

$$\boxed{m = 3}$$

$$A = \sqrt{a-1} - 3$$

$$1 \leq a \leq 5$$

$$0 \leq a-1 \leq 4$$

$$0 \leq \sqrt{a-1} \leq 2$$

$$-3 \leq \sqrt{a-1} - 3 \leq -1$$

$$\boxed{-3 \leq A \leq -1}$$

$$D_f: \mathbb{R}, f(x) = \sqrt{\cos x + 1}$$

$$\forall x \in \mathbb{R} \Rightarrow -x \in \mathbb{R}$$

$$\begin{aligned} f(-x) &= \sqrt{\cos(-x) + 1} \\ &= \sqrt{\cos x + 1} = f(x) \end{aligned}$$

$\boxed{\text{f دالة زوجية}}$

$$A(m) = \frac{-3x+9}{4x+8}$$

$$A(m) \geq 0$$

$$3 \leftarrow \frac{-3x+9}{4x+8} \geq 0$$

-2 ←

x	$-\infty$	-2	3	$+\infty$
$-3x+9$	+	+	0	-
$4x+8$	-	0	+	+
$\frac{-3x+9}{4x+8}$	-	+	0	-
المتراصة	$\equiv$	صحيحة	$\equiv$	

$$\boxed{]-2, 3]}$$

$$x^2 - 2mx + 9 = 0$$

$$\begin{aligned} \Delta &= (-2m)^2 - 4(1)(9) \\ &= 4m^2 - 36 \end{aligned}$$

لها حل واحد

$$\Delta = 0$$

$$4m^2 - 36 = 0 \quad 4m^2 = 36$$

$$P(B) = \frac{2}{3}$$

$$f(x) = 2x - 3$$

$$A(0, f(0) = -3)$$

$$B(1, f(1) = -1)$$

$$C(2, f(2) = 1)$$

$$\left. \begin{array}{l} \vec{AB} (1, 2) \\ \vec{BC} (1, 2) \end{array} \right\} \frac{1}{1} = \frac{2}{1}$$

$$\vec{AB} = \vec{AC}$$

فالسطحات  $\vec{AB}$  و  $\vec{AC}$  مرتبطتان  
خطياً فالنقطة  $C$

$A$  و  $B$  و  $C$  تقع على استقامة واحدة

$$U_n = 2n^2 + 3n$$

$$\begin{aligned} U_{n+1} &= 2(n+1)^2 + 3(n+1) \\ &= 2(n^2 + 2n + 1) + 3n + 3 \\ &= 2n^2 + 4n + 2 + 3n + 3 \end{aligned}$$

$$U_{n+1} = 2n^2 + 7n + 5$$

$$U_{n+1} - U_n = 2n^2 + 7n + 5 - 2n^2 - 3n$$

$$U_{n+1} - U_n = 4n + 5$$

$$\sin(2x) = 1$$

$$[-\pi, \pi];$$

$$2x = \frac{\pi}{2} + 2\pi k$$

$$x = \frac{\pi}{4} + \pi k$$

$$k=0 \Rightarrow x = \frac{\pi}{4}$$

$$k=-1 \Rightarrow x = \frac{\pi}{4} - \pi$$

$$x = -\frac{3\pi}{4}$$

$$S: \left\{ \frac{\pi}{4}, -\frac{3\pi}{4} \right\}$$

$A$  و  $B$  حدثان مستقلان  
استقالياً

$$P(A \cap B) = \frac{1}{3} \text{ و } P(A) = \frac{1}{2}$$

$$P(B) = ?$$

بأن الاحتمالين مستقلان  
استقالياً  $B$  و  $A$

$$P(A \cap B) = P(A) \cdot P(B)$$

$$\frac{1}{3} = \frac{1}{2} \cdot P(B)$$

$$2 = 3 \cdot P(B)$$

$$y = \frac{\pi}{2} \quad ; \quad x = \frac{\pi}{4}$$

$$\cos(x+y) = \cos\left(\frac{\pi}{4} + \frac{\pi}{2}\right)$$

$$= \cos\left(\frac{3\pi}{4}\right)$$

$$135^\circ \leftarrow 3 \times 45^\circ$$

مع تاني

$$= -\cos\frac{\pi}{4}$$

$$\cos(x+y) = -\frac{\sqrt{2}}{2}$$

I مثلث في I

[BC] منتصف

فيان M منتصف [AI]

مركز أبعاد متناهي

للنقاط المتقاطعة.

بأن I منتصف [BC]

I M P M J (B, 1) (C, 1)

وبأن M منتصف [AI]

M P M J

(I, 2)

(A, 2)

M P M J

(A, 2) (B, 1) (C, 1)