

$\frac{\omega}{\epsilon} = \frac{\text{طول موج}}{\text{طول موج}}$

1A, V5

الترددات الزائفة مقابل حقيقي

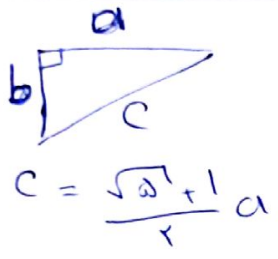
$$\frac{\omega + n}{r} = \frac{1 + \sqrt{\omega}}{r}$$

(2)

$$\omega + n = 1 + \sqrt{\omega} \rightarrow n = \sqrt{\omega} - 1$$

سؤال: $\frac{\epsilon \times (r\sqrt{\omega} + 1)}{\epsilon \times \omega} = \frac{r\sqrt{\omega} + 1}{\omega}$ ✓

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$$a^r + b^r = c^r \rightarrow a^r + b^r = \frac{r + r\sqrt{\omega}}{\epsilon} a^r$$

(2)

$$\rightarrow b^r = \frac{r + r\sqrt{\omega}}{\epsilon} a^r$$

$$\rightarrow \frac{a^r}{b^r} = \frac{\epsilon}{r + r\sqrt{\omega}} = \frac{r}{\sqrt{\omega} + 1}$$

$(\frac{a}{b})^r = ? \quad \frac{a^r}{b^r} = \frac{r}{\sqrt{\omega} + 1} = \frac{\sqrt{\omega} - 1}{r}$ ✓

$$r^2 a + \sqrt{r^2 a^2 + \epsilon a} = r$$

(2)

$$\sqrt{r^2 a^2 + \epsilon a} = r - r a \rightarrow r - r a > 0$$

$$r^2 a^2 + \epsilon a = r^2 a^2 + \epsilon - 1 r a \rightarrow \sqrt{a^2 - 14a + \epsilon} = 0 \rightarrow a \begin{cases} \frac{1\epsilon}{v} = r \rightarrow \times \text{ (not possible)} \\ \frac{r}{v} \rightarrow \checkmark \end{cases}$$

$\frac{a+1}{a} = ? \quad a = \frac{r}{v} \rightarrow \frac{\frac{r}{v} + 1}{\frac{r}{v}} = \frac{r + v}{r} = \frac{9}{r} = \frac{9}{r} = \epsilon, \omega$ ✓

$$\frac{\sqrt{n+1}}{\sqrt{n-1} + r} - \frac{\sqrt{n+1}}{r - \sqrt{n-1}} = \frac{n+1}{\sqrt{n-1}}$$

$$\frac{r\sqrt{n+1} - r\sqrt{n-1} - r\sqrt{n+1}}{r^2 - (\sqrt{n-1})^2} = \sqrt{n+1}$$

1, V5
 $-r\sqrt{n-1} = (10-n)\sqrt{n-1}$
 (ق)!

$-r\sqrt{n+1} = 10 - n \leq 0$
 $n \geq 10$

$$n = \frac{r\epsilon \pm \sqrt{19r}}{r}$$

$$\epsilon n + \epsilon = 100 + n^2 - r n$$

$$\leftarrow n^2 - r\epsilon n + 94 = 0$$

$n = 12 \pm 4\sqrt{3} \rightarrow 12 + 4\sqrt{3}$ قق

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$$\frac{1}{\sqrt{r-n} + r} - \frac{1}{r - \sqrt{r-n}} = \frac{r-n}{\omega \sqrt{r-n}}$$

$$\frac{r - \sqrt{r-n} - r - \sqrt{r-n}}{r^2 - (\sqrt{r-n})^2} = \frac{\sqrt{r-n}}{\omega} \rightarrow -10\sqrt{r-n} = n + r\sqrt{r-n}$$

(2)

$\times n = 12 \pm 4\sqrt{3} - 10 = n + r$

$$n = 12$$

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$$\frac{1}{2x^2} + \frac{1}{(1-x)^2} = \frac{14}{9}$$

$$9(1-x)^2 + 9x^2 = 14 \cdot x^2(1-x)^2$$

$$9x^2 - 18x + 9 + 9x^2 = 14 \cdot (x^2 - 2x^3 + x^4)$$

$$14x^4 - 28x^3 + 14x^2 + 18x - 9 = 0 \rightarrow$$

آزمون دقت
دوت ریشه ديدم دارم!

$$\frac{1}{x} + \frac{1}{x} = 1 \quad ? \quad \text{مربع ریشه}$$

$$\sqrt{1 + \sqrt{-4x^2 + 8x - 4}} + \sqrt{x^2 + \sqrt{-x^2 + 4x - 4}} = x + 2$$

$$\sqrt{4} + \sqrt{4} = 4 + 2 \quad \checkmark$$

$$\rightarrow \frac{-4}{+} \frac{4}{-} \frac{4}{+}$$

$$\rightarrow \frac{2}{-} \frac{4}{+}$$

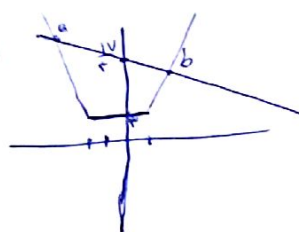
تساير است

يك جواب ؟ مقدار جواب

$$y = |x+2| + |x-1|$$

$$y + x = 14$$

$$y = \frac{x}{2} + \frac{14}{2}$$



$$y = |x+2| + |x-1|$$

$$\rightarrow \frac{-2}{-x-1} \frac{1}{x+1}$$

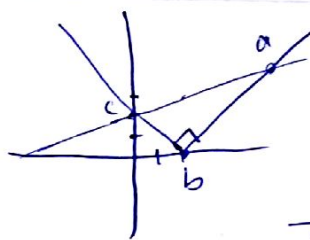
$$\rightarrow a: \frac{-x}{2} + \frac{14}{2} = -x-1 \rightarrow x = -4, y = 7$$

$$\rightarrow b: \frac{-x}{2} + \frac{14}{2} = x+1 \rightarrow x = 2, y = 5$$

$$? \quad \sqrt{(2-(-4))^2 + (5-7)^2} = 2\sqrt{10} \quad \checkmark$$

$$y = \frac{1}{2}x + 2$$

$$y = \sqrt{x^2 - 2x + 2} \rightarrow y = |x-1|$$



$$a: \frac{1}{2}x + 2 = x-1$$

$$\rightarrow x = 4, y = 4$$

$$ab = \sqrt{(4-1)^2 + (4-0)^2} = 5\sqrt{2}$$

$$bc = \sqrt{2^2 + 2^2} = 2\sqrt{2}$$

$$? \quad \frac{ab \times bc}{2} = \frac{5\sqrt{2} \times 2\sqrt{2}}{2} = 10 \quad \checkmark$$

بهر روز مسافت زودتر از نهار

$$\frac{1}{b} + \frac{1}{b+9} = \frac{1}{20} \rightarrow 20b + 180 + 20b = b^2 + 9b$$

$$\rightarrow b^2 - 11b - 180 = 0$$

بهر روز چند مسافت ؟

$$34 \quad \checkmark$$

$$b \begin{cases} 20 \\ -180 \end{cases}$$

$$\frac{1 - 2n + n^r + n^s}{(n(1-n))^r} = \frac{2(n^r - n) + 1}{(n - n^r)^r} = \frac{14_0}{9} \xrightarrow{n^r - n = t} \frac{2t+1}{t^r} = \frac{14_0}{9}$$

$$14_0 t^r - 18t - 9 = 0 \xrightarrow{\text{root}} \begin{cases} t = 0,3 \rightarrow n^r - n - 0,3 = 0 \xrightarrow{\Delta > 0} S = 1 \\ t = -\frac{r}{14} \rightarrow n^r - n + \frac{r}{14} = 0 \xrightarrow{\Delta > 0} S = 1 \end{cases}$$

$$S = 2$$