

نام و نام خانوادگی: آری غفرانی سوادکوهی پاسخنامه تشریحی تکلیف شماره ۱۳۰۰ کلاس دوازدهم β

تقریب سینوسی ها $\rightarrow \frac{\sin A}{\sin 60^\circ} = \frac{\sin B}{\frac{2\sqrt{3}}{3}} \rightarrow 2 \sin B = \frac{2\sqrt{3} \times \sqrt{3}}{3 \times 3} \rightarrow \sin B = \frac{\sqrt{3}}{3} \rightarrow B = 30^\circ$
 $\hat{A} \hat{B} \hat{C} = 180^\circ \rightarrow \hat{A} + \hat{B} = 120^\circ \rightarrow \hat{A} = 90^\circ$
 $C = \sqrt{40}$

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$\hat{A} + \hat{B} + \hat{C} = 180^\circ \rightarrow \hat{A} = 120^\circ$
 $\frac{\sin A}{\frac{2\sqrt{3}}{3}} = \frac{\sin 120^\circ}{\frac{2\sqrt{3}}{3}} \rightarrow \frac{\sin 120^\circ}{\frac{2\sqrt{3}}{3}} = \frac{\sin 60^\circ}{\frac{\sqrt{3}}{2}} \rightarrow \sin 60^\circ = \frac{\pi}{\frac{\sqrt{3}}{2}} = \frac{2\sqrt{3}}{3}$
 $m = \frac{3}{4}$

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$(b^2 - r) \frac{\sin \theta}{\sin \hat{B}} = c \rightarrow \frac{b^2 - r}{\sin \hat{B}} = \frac{c}{\sin \theta}$ تقریب سینوسی ها $b^2 - r = b$ $\begin{cases} r = b \\ 3 - 1 = 2 \end{cases}$

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$a^2 = b^2 + c^2 - 2bc \cos \hat{A} \rightarrow 13^2 = (2)^2 + (3)^2 - 2(2)(3) \cos \hat{B}$
 $-4\sqrt{2} = -12 \cos \hat{B} \rightarrow \cos \hat{B} = \frac{1}{\sqrt{2}} \rightarrow \sin^2 \hat{B} + \cos^2 \hat{B} = 1 \rightarrow \sin \hat{B} = \frac{1}{\sqrt{2}}$

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$a^2 = b^2 + c^2 - 2bc \cos \hat{A}$

$a^2 = 14 + (2 + \sqrt{3})^2 - 2(2)(2 + \sqrt{3}) \frac{1}{2}$

$a^2 = 14 + 13 + 4\sqrt{3} - 1 - 4\sqrt{3} = 26$

الف: $\hat{A} = 60^\circ \rightarrow \hat{B} + \hat{C} = 120^\circ$

$\frac{\sin A}{a} = \frac{\sin B}{b} \rightarrow \frac{\frac{\sqrt{3}}{2}}{\sqrt{13}} = \frac{\sin B}{2}$

$2 \sin B = \frac{\sqrt{13}}{2} \rightarrow \hat{B} = 30^\circ, \hat{C} = 90^\circ$

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$$a^2 = b^2 + c^2 - 2bc \cos A \rightarrow c^2 = c^2 + 1 - 2(1)(c) \cos A \rightarrow -1 = -c \cos A \rightarrow \underline{\underline{\frac{1}{c} = \cos A}}$$

$$\overline{DE}^2 = (g)^2 + (f)^2 - 2(g)(f) \cos A = 1^2 + 1^2 - 1^2 = 1 \Rightarrow \overline{DE} = \sqrt{1}$$

$$a^r = b^r + c^r - rbc \cos A$$

$$20 + 42 - 5 = 57 \rightarrow \underline{CB = V}$$

الف

$\frac{1}{r} a b \sin \theta$

$$\frac{1}{r} \Delta \sin \theta = 1 \cdot \sqrt{3}$$

$$\frac{(b+c)^p - a^p}{bc(\cos A + 1)} = \frac{b^p + c^p + pbc - a^p}{bc \cos A + bc} = \frac{pbc \cos A + pbc}{bc \cos A + bc} = p$$

$$a^2 = b^2 + c^2 - 2bc \cos A$$

$$\underline{a^T + {}^T b C \Rightarrow A = b^T + C^T}$$

$$\frac{a^r + b^r - c^r}{a + b - c}, a \rightarrow \cancel{a^r} + b^r - c^r = \cancel{a^r} + a^r b - a^r c \rightarrow \cancel{(b-c)}(b^r + c^r + cb) = a^r \cancel{(b-c)}$$

$$b^r + c^r + cb = b^r + c^r - rbc \cos A \quad \text{and } \cos A = -\frac{1}{r} \quad \text{and } \underline{A = 120^\circ}$$

$$\dot{\phi} = \frac{1}{r} \frac{d}{dt} (r^2 \dot{\theta}) \Rightarrow \frac{1}{r} \frac{d}{dt} (r^2 \dot{\theta}) = \dot{\phi} \Rightarrow r^2 \dot{\theta} = \dot{\phi} r^2 \Rightarrow \dot{\theta} = \dot{\phi}$$

$\cos \alpha \begin{cases} \frac{1}{2} \times \cancel{\text{no}} & \frac{1}{2} \cos \alpha \geq -1 \\ +1 \times \cancel{\text{no}} & \text{no} \end{cases}$

$$a^2 = b^2 + c^2 - 2bc \cos A = 7^2 + 14^2 - 2 \cdot 7 \cdot 14 \cdot \frac{1}{2} = 49 - 196 = -147$$