

نام و نام خانوادگی سید علی حسینی پاسخنامه تشریحی تکلیف شماره ۱۰۰۰ کلاس دوازدهم A

$$\hat{A} = 70 \Rightarrow \frac{70}{\frac{\sqrt{3}}{2}} = \frac{\frac{2\sqrt{3}}{3}}{\sin B} \Rightarrow \sin B = \frac{\sqrt{3}}{2} \Rightarrow B = 60^\circ$$

$$\Rightarrow C = 180 - 60 = 120^\circ$$

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~~$$\frac{2\sqrt{3}}{3}$$~~
$$A_x = 60^\circ \Rightarrow \frac{\frac{2\sqrt{3}}{3}}{\frac{\sqrt{3}}{2}} = \frac{AC}{\frac{\sqrt{3}}{2}} \Rightarrow AC = 2\sqrt{3}$$

$$\Rightarrow \frac{2\sqrt{3}}{1} = \frac{n}{\frac{\sqrt{3}}{2}} \Rightarrow n = 4$$

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$$\frac{b^2 - 2}{\sin B} = \frac{c}{\sin C} = \frac{b}{\sin A} \Rightarrow \frac{b^2 - 2}{\sin B} = \frac{b}{\sin B} \Rightarrow b^2 - 2 = b$$

$$\Rightarrow b^2 - b - 2 = 0 \Rightarrow b = \begin{cases} +2 \checkmark \\ -1 \times \end{cases} \Rightarrow b = 2$$

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$$13^2 = 11^2 + 10^2 - 2(11)(10) \cos B$$

$$\Rightarrow 169 = \frac{121 + 100}{121} - 110 \cos B \Rightarrow 110 \cos B = \frac{272}{121} \Rightarrow \cos B = \frac{272}{13310}$$

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$$\Rightarrow \cos B = \frac{272}{13310} = 0.11 \Rightarrow \sin B = 0.99$$

$$17 + 17 + 17\sqrt{3} - [(1 + 1\sqrt{3}) \frac{1}{2}] = 34 + 17\sqrt{3} - 1 - 1\sqrt{3} = 33 + 16\sqrt{3} = a^2$$

$$\Rightarrow a = \sqrt{33 + 16\sqrt{3}} = 2\sqrt{3}$$

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$$\frac{\frac{12\sqrt{3}}{2}}{\frac{\sqrt{3}}{2}} = \frac{4}{\sin B} = \frac{2 + 2\sqrt{3}}{\sin C} \Rightarrow \sin B = \frac{\sqrt{3}}{2} \Rightarrow B = 60^\circ$$

$$\Rightarrow \sin C = \frac{2 + 2\sqrt{3}}{4} = \frac{1 + \sqrt{3}}{2}$$

$$1 + r - r \cos \alpha = r \Rightarrow \cos \alpha = \frac{1}{r}$$

$$\Rightarrow 14 + 12 - \frac{12}{r} = DE^2 = r_0 \Rightarrow DE = \sqrt{r_0}$$

$$7r + 2a - 10 \frac{1}{r} = r_0 = (B^r) \Rightarrow (B = V \quad (2))$$

$$\frac{1}{2} \times \omega \times A^2 \times \frac{\sqrt{r}}{r} = 10 \sqrt{r}$$

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

$$\Rightarrow \frac{2bc(\cos \hat{A} + 1)}{bc(\cos \hat{A} + 1)} = 1$$

$$\begin{aligned} a^2 + b^2 - c^2 &= a^2 + a^2 b - a^2 c \Rightarrow b^2 - c^2 = a^2 b - a^2 c \\ \Rightarrow (b-c)(b+c) &= a^2(b-c) \Rightarrow b+c = a^2 \\ \Rightarrow b^2 + c^2 + cb &= b^2 + c^2 - 2bc \cos \hat{A} \Rightarrow \cos \hat{A} = -\frac{1}{r} \\ \Rightarrow \hat{A} &= 110^\circ \end{aligned}$$

$$\begin{aligned} (r - \cos \theta)(1 + r \cos \theta) + \frac{1}{r} &= r \Rightarrow r + 1 \cos \theta - r \cos^2 \theta = 1 \\ \Rightarrow r(\cos^2 \theta - \cos \theta + 1) &= 0 \Rightarrow \cos \theta = \frac{1}{2} \Rightarrow \theta = 60^\circ \\ \Rightarrow AB &= r \sin \theta = r \sin 60^\circ = \frac{r\sqrt{3}}{2} \end{aligned}$$

$$\Rightarrow 14 + 12 - \frac{12}{r} = r_0 - 12\sqrt{r} = a^2$$