

کلاس ۱۸:۳۰ و ۱۸:۳۰
۱۶:۳۰

کلیف شماره ۱۸
شماره

پرتو پرتو

$$\tan \frac{11\pi}{6} + \sin \frac{15\pi}{6} \cos \frac{13\pi}{6} = -1 + (-\frac{\sqrt{3}}{2} \times (-\frac{\sqrt{3}}{2})) = -1 + \frac{1}{2} = -\frac{1}{2}$$

$$\tan \frac{14\pi}{6} \sin \frac{11\pi}{6} + \cos \frac{10\pi}{6} = \frac{\sqrt{3}}{2} \times (-\frac{\sqrt{3}}{2}) + (-\frac{1}{2}) = -\frac{1}{2} - \frac{1}{2} = -1$$

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

$$= \frac{12 - 1}{4 + 1} = \frac{11}{5}$$

$$\sin \alpha = r \cos \alpha, \alpha \text{ ر } \Rightarrow \sin^2 \alpha + \cos^2 \alpha = 1 \Rightarrow (r \cos \alpha)^2 + \cos^2 \alpha = 1$$

$$r^2 \cos^2 \alpha + \cos^2 \alpha = \cos^2 \alpha = 1 \Rightarrow \cos \alpha = \pm \sqrt{\frac{1}{5}} = \pm \frac{\sqrt{5}}{5}$$

$$\sin \alpha = \frac{\sqrt{5}}{5} \Rightarrow \cos \alpha = \frac{-\sqrt{5}}{5} = -\frac{\sqrt{5}}{5} \quad \cos(11\frac{\pi}{6} + \alpha) = \cos(2\frac{\pi}{6} + \alpha) = \cos 2\frac{\pi}{6} \times \cos \alpha - \sin 2\frac{\pi}{6} \times \sin \alpha = -\frac{\sqrt{3}}{2} \times (-\frac{\sqrt{5}}{5}) = \frac{\sqrt{15}}{10}$$

$$\sin(13\frac{\pi}{6} + \alpha) = \sin(10\frac{\pi}{6} + \alpha) = -\sin(\frac{\pi}{6} + \alpha) \quad \text{①}$$

$$\sin(\frac{\pi}{6} + \alpha) = \sin \frac{\pi}{6} \times \cos \alpha + \cos \frac{\pi}{6} \times \sin \alpha =$$

$$\frac{\sqrt{3}}{2} (\sin \alpha + \cos \alpha) = \frac{\sqrt{3}}{2} (\frac{1}{\sqrt{5}} + \frac{\sqrt{5}}{5}) = \frac{2}{5} \quad \text{②} \quad \text{و } \Rightarrow -\frac{2}{5}$$

$$r \sin^2 \alpha + \cos^2 \alpha = \frac{r}{r} \quad \tan^2 \alpha = ?$$

$$\sin^2 \alpha + \sin^2 \alpha + \cos^2 \alpha = \frac{r}{r} \Rightarrow \sin^2 \alpha = \frac{1}{r}$$

$$1 + \cot^2 \alpha = \frac{1}{\sin^2 \alpha} = r$$

$$\cot^2 \alpha = r \Rightarrow \tan^2 \alpha = \frac{1}{r}$$

$$\frac{1}{r} \times 6 \times \sqrt{r} \times \sin \alpha = r \sqrt{r} \sin \alpha = r, \Delta$$

$$\sin \alpha = \frac{\frac{1}{r} \Delta}{r \sqrt{r}} = \frac{1}{r} \times \frac{\sqrt{r}}{r} = \frac{\sqrt{r}}{r} \Rightarrow r : 1 : r. \quad \angle : 6.$$

$$\frac{1 : r}{6} = \underline{r}$$

$$\frac{a}{b} = \frac{r}{r} \Rightarrow b = \frac{r}{r} a$$

$$s = ab \sin \alpha$$

$$s = a \times \frac{r}{r} \times a \times \frac{1}{r} = \frac{r}{r} a^2 = a^2 \quad a^2 = r^2 \Rightarrow a = r \sqrt{r}$$

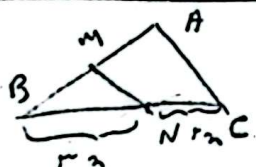
$$b = \frac{r}{r} \times r \sqrt{r} = r \sqrt{r}$$

$$p = 1 \sqrt{r} + 1 \sqrt{r} = \underline{2 \sqrt{r}}$$

$$\left. \begin{aligned} S_{ABC} &= \frac{1}{r} \Delta \times r \times \sin A \\ S_{ADE} &= \frac{1}{r} \Delta \times r \times \sin A \end{aligned} \right\} \Rightarrow S_{ABC} = S_{ADE} = \frac{r}{r} \sin A (\Delta - r)$$

$$\frac{r}{r} \sin A = 1/\Delta \quad \sin A = \frac{1/\Delta}{\frac{r}{r}} = 0/\Delta = \frac{1}{r}$$

$$A = r^\circ \quad \tan r^\circ = \frac{\sqrt{r}}{r}$$



$$rBN = rNC \rightarrow \frac{BN}{NC} = \frac{r}{r}$$

$$\frac{S_{ABC}}{S_{BMN}} = \frac{\frac{1}{r} AB \cdot BC \sin B}{\frac{1}{r} BM \cdot BN \sin B} = \frac{AB \cdot BC}{BM \cdot BN} = \frac{AB}{BM} = r$$

$$AB = rBM \Rightarrow \frac{BM}{AB} = \frac{1}{r} \rightarrow AB = r \Delta, MB = \Delta, MA = r \Delta$$

$$\frac{BM}{AM} = \frac{1}{r} = \underline{1, r \Delta}$$

$$\frac{|\sin \alpha|}{\cos \alpha} = -\tan \alpha = -\frac{\sin \alpha}{\cos \alpha} \Rightarrow |\sin \alpha| = -\sin \alpha \Rightarrow r, r \approx 6 \quad (1)$$

$$\frac{1}{|\cos \alpha|} - \frac{\sin \alpha}{\cos \alpha} = \frac{1 + \sin \alpha}{|\cos \alpha|} \begin{cases} \cos > 0 \\ \cos < 0 \end{cases} \quad 1 - \sin \alpha = 1 + \cos \alpha \Rightarrow \alpha = 0$$

$$1, r \Rightarrow r \approx 6$$