

高一年级数学第 13 课时《诱导公式》精讲课课后作业答案

1. D 2. B 3. B 4. C 5. A 6. B 7. C 8. A 9. A 10. D

提示：3. $\because \sin(\pi + \alpha) = \frac{3}{5}, \therefore \sin \alpha = -\frac{3}{5}$. 又 $\because \alpha$ 是第四象限角, $\therefore \cos \alpha = \frac{4}{5}$.

$$\cos(\alpha - 2\pi) = \cos(-2\pi + \alpha) = \cos \alpha = \frac{4}{5}. \quad \text{选 B.}$$

$$4. \text{原式} = -\cos(180^\circ - 60^\circ)\sin(180^\circ - 30^\circ) + \tan(135^\circ + 2 \times 360^\circ)$$

$$= -(-\cos 60^\circ)\sin 30^\circ + \tan 135^\circ$$

$$= -(-\cos 60^\circ)\sin 30^\circ + \tan(180^\circ - 45^\circ)$$

$$= -(-\cos 60^\circ)\sin 30^\circ + \tan 45^\circ$$

$$= \frac{1}{2} \times \frac{1}{2} - 1 = -\frac{3}{4}$$

$$5. \frac{1+2\cos(\theta+\pi)}{2-\cos(\theta-\pi)} = \frac{11}{7} \Rightarrow \frac{1-2\cos\theta}{2+\cos\theta} = \frac{11}{7} \Rightarrow 7(1-2\cos\theta) = 11(2+\cos\theta)$$

$$\Rightarrow \cos\theta = -\frac{3}{5}. \quad \text{又} \because \theta \text{ 是第二象限角}, \therefore \sin\theta = \frac{4}{5}. \quad \sin(\pi - \theta) = \sin\theta = \frac{4}{5}.$$

$$6. \quad \textcircled{1} \cos(k\pi + \frac{\pi}{3}) = \begin{cases} \cos \frac{\pi}{3}, & k \text{ 为偶数} \\ -\cos \frac{\pi}{3} & k \text{ 为奇数} \end{cases}; \quad \textcircled{2} \cos(2k\pi \pm \frac{\pi}{3}) = \cos(\pm \frac{\pi}{3}) = \cos \frac{\pi}{3}; \quad \textcircled{3}$$

$$\cos\left[(2k+1)\pi - \frac{2}{3}\pi\right] = -\cos \frac{2}{3}\pi = \cos \frac{\pi}{3}; \quad \textcircled{4} \cos[k\pi + (-1)^k \frac{\pi}{3}] \text{ 不一定等于 } \cos \frac{\pi}{3}. \text{ 选 B.}$$

$$10. \sin(3\pi + \alpha) = -\frac{1}{2} \Rightarrow \sin \alpha = \frac{1}{2}, \cos^2 \alpha = \frac{3}{4}.$$

$$\therefore \frac{4\sin(\alpha + \pi) + \cos^2(-\alpha)}{\sin(-\alpha - \pi)} = \frac{-4\sin \alpha + \cos^2 \alpha}{\sin \alpha} = -\frac{5}{2}.$$