# Home Work

# ( Appendix D )

**1)** $240^\circ = \ldots\ldots\ldots$ **rad**

**A)** $\frac{4\pi}{3}$ **C)** $\frac{3}{4\pi}$

**B)** $\frac{3\pi}{4}$ **D)** $\frac{4}{3\pi}$

**2)** $330^\circ = \ldots\ldots\ldots$ **rad**

**A)** $\frac{6\pi}{11}$ **C)** $\frac{5\pi}{3}$

**B)** $\frac{11\pi}{6}$ **D)** $\frac{3\pi}{5}$

**3)** $105^\circ = \ldots\ldots\ldots$ **rad**

**A)** $\frac{6\pi}{11}$ **C)** $\frac{12\pi}{5}$

**B)** $\frac{11\pi}{6}$ **D)** $\frac{7\pi}{12}$

**4)** $486^\circ = \frac{27\pi}{10}$ **rad**

**A)** True **B)** False

**5)** $\frac{13\pi}{2} =$ **.....**

**A)** $117°$ **C)** $234°$

**B)** $1170°$ **D)** $2340°$

**6)** $\frac{14\pi}{3} =$ **.....**

**A)** $840°$ **C)** $420°$

**B)** $84°$ **D)** $42°$

**7)** $\frac{7\pi}{6} =$ **.....**

**A)** $100°$ **C)** $420°$

**B)** $130°$ **D)** $210°$

**8)** $\frac{15\pi}{4} = 870°$

**A)** True **B)** False

**9)** $-\frac{5\pi}{9} =$ **.....**

**A)** $-100°$ **C)** $-10°$

**B)** $-450°$ **D)** $-900°$

**10)** $-\frac{9\pi}{10} = -162°$

**A)** True **B)** False

**11)** $\sin \pi =$ .....

**A)** $0$ **C)** $-1$

**B)** $1$ **D)** Undefined

**12)** $\cos(2\pi) =$ .....

**A)** $0$ **C)** $-1$

**B)** $1$ **D)** Undefined

**13)** $\sec\left(\frac{\pi}{2}\right) =$ .....

**A)** $0$ **C)** $-1$

**B)** $1$ **D)** Undefined

**14)** $\csc\left(\frac{3\pi}{2}\right) =$ .....

**A)** $0$ **C)** $-1$

**B)** $1$ **D)** Undefined

**15)** $\tan\left(\frac{\pi}{4}\right) =$ .....

**A)** $\frac{1}{\sqrt{3}}$ **C)** $\sqrt{3}$

**B)** $1$ **D)** -1

**16)** $\cot\left(-\frac{\pi}{3}\right) =$ .....

**A)** $-\frac{1}{\sqrt{3}}$ **C)** $\sqrt{3}$

**B)** $\frac{1}{\sqrt{3}}$ **D)** $-\sqrt{3}$

**17)** $\csc\left(-\frac{\pi}{6}\right) =$ .....

**A)** $2$ **C)** $-2$

**B)** $\frac{1}{2}$ **D)** $-\frac{1}{2}$

**18)** $\sec(-180°) =$ .....

**A)** $-1$ **C)** $1$

**B)** $0$ **D)** Undefined

**19)** $\csc(-270°) =$ .....

**A)** $-1$ **C)** $1$

**B)** $0$ **D)** Undefined

**20)** If $\sin(\theta) = \frac{\sqrt{7}}{4}$ and $0 < \theta < \frac{\pi}{2}$ *then* $\cot\theta =$ .....

**A)** $\frac{3}{\sqrt{7}}$ **C)** $\frac{\sqrt{7}}{3}$

**B)** $\frac{4}{\sqrt{7}}$ **D)** $\frac{\sqrt{7}}{4}$

**21)** $\mathbf{If\ sec(\theta) = -5\ and\ 0 < \theta < \pi\ \ then\ \csc\theta = .....}$

**A)** $\frac{2\sqrt{6}}{5}$ **C)** $-\frac{5\sqrt{6}}{12}$

**B)** $-\frac{2\sqrt{6}}{5}$ **D)** $\frac{5\sqrt{6}}{12}$

**22)** $\mathbf{If\ \cot(\theta) = \frac{3}{2}\ and\ \pi < \theta < \frac{3\pi}{2}\ \ then\ \sin\theta = .....}$

**A)** $\frac{2}{\sqrt{13}}$ **C)** $-\frac{2}{\sqrt{13}}$

**B)** $-\frac{\sqrt{13}}{3}$ **D)** $\frac{\sqrt{13}}{3}$

**23)** $\mathbf{If\ \csc(\theta) = -\frac{5}{2}\ and\ \frac{3\pi}{2} < \theta < 2\pi\ \ then\ \tan\theta =}$

**A)** $\frac{2}{\sqrt{21}}$ **C)** $-\frac{2}{\sqrt{21}}$

**B)** $-\frac{\sqrt{21}}{2}$ **D)** $\frac{\sqrt{21}}{2}$

**24)** $\mathbf{If\ \tan(\theta) = \frac{2}{5}\ and\ 0 < \theta < \frac{\pi}{2}\ \ then\ \cos\theta =}$

**A)** $\frac{5}{\sqrt{29}}$ **C)** $\frac{2}{\sqrt{29}}$

**B)** $\frac{\sqrt{29}}{2}$ **D)** $\frac{\sqrt{29}}{5}$

**25)** $\mathbf{\sin\left(\frac{2\pi}{3}\right) = .....}$

**A)** $-\frac{\sqrt{3}}{2}$ **C)** $\frac{\sqrt{3}}{2}$

**B)** $\frac{1}{2}$ **D)** $-\frac{1}{2}$

**26)** $\boldsymbol{\cos^2(\beta) - \sin^2(\beta) = \ldots\ldots\ldots}$

**A)** $\cos(2\beta)$ **C)** $1$

**B)** $\sin(2\beta)$ **D)** $\cos(\beta)$

**27)** $\boldsymbol{\cot^2(\beta) - \csc^2(\beta) = \ldots\ldots\ldots}$

**A)** $-1$ **C)** $1$

**B)** $\tan^2(\beta)$ **D)** $\sec^2(\beta)$

**28)** $\boldsymbol{1 - \sin^2(\beta) = \ldots\ldots\ldots}$

**A)** $\boldsymbol{\cos^2(\beta)}$ **C)** $\boldsymbol{-\cos^2(\beta)}$

**B)** $\boldsymbol{\cot^2(\beta)}$ **D)** $\boldsymbol{-\cot^2}(\beta)$

**29)** $\boldsymbol{1 - \sec^2(\beta) = \ldots\ldots\ldots}$

**A)** $\boldsymbol{\sin^2(\beta)}$ **C)** $\boldsymbol{-\sin^2(\beta)}$

**B)** $\boldsymbol{\tan^2(\beta)}$ **D)** $\boldsymbol{-\tan^2}(\beta)$

**30)** $\boldsymbol{\frac{\cos\theta}{\sin\theta} = \ldots\ldots\ldots}$

**A)** $\boldsymbol{\tan\theta}$ **C)** $\boldsymbol{\cot\theta}$

**B)** $\boldsymbol{\sec\theta}$ **D)** $\boldsymbol{\csc\theta}$

**31)** $\frac{1}{\csc\theta} =$ .....

**A)** $\sec\theta$ **C)** $\cot\theta$

**B)** $\sin\theta$ **D)** $\cos\theta$

**32)** $\cot\theta \ \sin\theta =$ .....

**C)** $\csc\theta$ **C)** $\cot\theta$

**D)** $\sin\theta$ **D)** $\cos\theta$

**33)** $\cot\theta \ \tan\theta = 1$

**A)** True **B)** False

**34)** $\cos\left(\frac{2\pi}{5}\right) =$ .....

**C)** $\cos^2\left(\frac{\pi}{5}\right) + \sin^2\left(\frac{\pi}{5}\right)$ **C)** $\cos^2\left(\frac{\pi}{5}\right) - \sin^2\left(\frac{\pi}{5}\right)$

**D)** $2\cos\left(\frac{\pi}{5}\right)\sin\left(\frac{\pi}{5}\right)$ **D)** $\cos\left(\frac{\pi}{5}\right)\sin\left(\frac{\pi}{5}\right)$

**35)** $\sin\left(\frac{2\pi}{5}\right) =$ .....

**A)** $\cos^2\left(\frac{\pi}{5}\right) + \sin^2\left(\frac{\pi}{5}\right)$ **C)** $\cos^2\left(\frac{\pi}{5}\right) - \sin^2\left(\frac{\pi}{5}\right)$

**B)** $2\cos\left(\frac{\pi}{5}\right)\sin\left(\frac{\pi}{5}\right)$ **D)** $\cos\left(\frac{\pi}{5}\right)\sin\left(\frac{\pi}{5}\right)$

**36)** If $\sin(\alpha) = \frac{3}{\sqrt{10}}$ and $\cos(\alpha) = \frac{1}{\sqrt{10}}$ then $\sin(2\alpha) =$ ... ... ... ...

**A)** $\frac{3}{10}$ **C)** $\frac{4}{5}$

**B)** $\frac{3}{5}$ **D)** $-\frac{4}{5}$

**37)** If $\sin(x) = \frac{3}{\sqrt{10}}$ and $\cos(x) = \frac{1}{\sqrt{10}}$ then $\cos(2x) =$ ... ... ... ...

**A)** $\frac{3}{10}$ **C)** $\frac{4}{5}$

**B)** $\frac{3}{5}$ **D)** $-\frac{4}{5}$

**38)** If $\sin(\alpha) = \frac{3}{5}$ and $\cos(\alpha) = \frac{4}{5}$ then $\sin(2\alpha) =$ ... ... ... ...

**A)** $\frac{12}{25}$ **C)** $\frac{7}{25}$

**B)** $\frac{24}{25}$ **D)** $-\frac{7}{25}$

**39)** If $\sin(\theta) = \frac{3}{5}$ and $\cos(\theta) = \frac{4}{5}$ then $\cos(2\theta) =$ ... ... ... ...

**C)** $\frac{12}{25}$ **C)** $\frac{7}{25}$

**D)** $\frac{24}{25}$ **D)** $-\frac{7}{25}$

**40)** $\cot\left(\frac{\pi}{7}+2\pi\right)=\cot\left(\frac{\pi}{7}\right)$

**A)** True **B)** False

**41)** $\sec\left(\frac{\pi}{3}+2\pi\right)=2$

**A)** True **B)** False

أرجو من الله لكِ التوفيق والنجاح اللهم افتح عليها فتوح العارفين والعالمين وألهمها الصواب في جميع الاختبارات الدنيا والآخرة

أ غادة سمير مطر