

Determine the exact value function.

1) $\sin^{-1}(\sin^{-1}(\frac{1}{6}\pi))$

2) $\sin^{-1}(\sin(-\frac{1}{6}\pi))$

3) $\sin^{-1}(\sin^{50}(\frac{1}{6}))$

4) $\sin^{-1}(\sin^{110}(\frac{1}{6}))$

5) $\cos^{-1}(\cos^{-1}(\frac{1}{2}\pi))$

6) $\cos^{-1}(\cos(-\frac{1}{2}\pi))$

7) $\cos^{-1}(\cos^{20}(\frac{1}{2}))$

8) $\cos^{-1}(\cos^{40}(\frac{1}{2}))$

9) $\tan^{-1}(\tan^2(\frac{1}{6}\pi))$

10) $\tan^{-1}(\tan(-\frac{1}{2}\pi))$