

Find the exact value of the expression.

1) $\sin^{-1}(1)$

2) $\sin^{-1}(-0.5)$

A) $\frac{\pi}{3}$

B) $\frac{7\pi}{3}$

C) $-\frac{\pi}{6}$

D) $\frac{\pi}{6}$

2) _____

3) $\cos^{-1}\left(-\frac{\sqrt{2}}{2}\right)$

4) $\tan^{-1}(-1)$

5) $\tan^{-1}(1)$

Find the exact value of the expression, if possible.

6) $\cos^{-1}\left[\cos\left(-\frac{\pi}{6}\right)\right]$

A) $\frac{7\pi}{6}$

B) $\frac{\pi}{6}$

C) $\frac{5\pi}{6}$

D) $-\frac{\pi}{6}$

6) _____

7) $\cos(\cos^{-1} 0.5)$

A) 2.6

B) 3.6

C) 0.9

D) 0.5

7) _____

Use a sketch to find the exact value of the expression.

8) $\cos\left(\sin^{-1}\frac{3}{5}\right)$

9) $\cos\left(\tan^{-1}\frac{1}{5}\right)$

Use a right triangle to write the expression as an algebraic expression. Assume that x is positive and in the domain of the given inverse trigonometric function.

10) $\cos(\sin^{-1} x)$

A) $\sqrt{1-x^2}$

B) $\sqrt{x^2+1}$

C) $\frac{\sqrt{x^2+1}}{x}$

D) $\sqrt{x^2-1}$

10) _____

11) $\sin(\tan^{-1} x)$

A) $\frac{x\sqrt{x^2-1}}{x^2-1}$

B) $\frac{\sqrt{x^2+1}}{x^2+1}$

C) $\frac{x\sqrt{x^2+1}}{x^2+1}$

D) $x\sqrt{x^2+1}$

11) _____

12) $\sin(\sec^{-1} \frac{\sqrt{x^2+4}}{x})$

Answer Key

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1) $\frac{\pi}{2}$

2) C

3) $\frac{3\pi}{4}$

4) $-\frac{\pi}{4}$

5) $\frac{\pi}{4}$

6) B

7) D

8) $\frac{4}{5}$

9) $\frac{5\sqrt{26}}{26}$

10) A

11) C

12) $\frac{2\sqrt{x^2 + 4}}{x^2 + 4}$