

Inverse Trigonometric Ratios

Name: _____

Date: _____

Find the value of each inverse trigonometric ratio in degrees.

1) $\csc^{-1}(2)$

2) $\sec^{-1}(1)$

3) $\csc^{-1}(\sqrt{2})$

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

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

6) $\cos^{-1}(0)$

7) $\cot^{-1}(0)$

8) $\cot^{-1}(1)$

9) $\sin^{-1}\left(\frac{1}{2}\right)$

Find the value of each inverse trigonometric ratio in radians.

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

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

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

4) $\tan^{-1}\left(\frac{1}{\sqrt{3}}\right)$

5) $\csc^{-1}(2)$

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

7) $\cot^{-1}\left(\frac{\sqrt{3}}{3}\right)$

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

9) $\sec^{-1}(\sqrt{2})$

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Find the value of each inverse trigonometric ratio in degrees.

1) $\csc^{-1}(2)$

30°

2) $\sec^{-1}(1)$

0°

3) $\csc^{-1}(\sqrt{2})$

45°

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

45°

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

60°

6) $\cos^{-1}(0)$

90°

7) $\cot^{-1}(0)$

90°

8) $\cot^{-1}(1)$

45°

9) $\sin^{-1}\left(\frac{1}{2}\right)$

30°

Find the value of each inverse trigonometric ratio in radians.

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

$\frac{\pi}{6}$

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

$\frac{\pi}{3}$

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

$\frac{\pi}{3}$

4) $\tan^{-1}\left(\frac{1}{\sqrt{3}}\right)$

$\frac{\pi}{6}$

5) $\csc^{-1}(2)$

$\frac{\pi}{6}$

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

$\frac{\pi}{6}$

7) $\cot^{-1}\left(\frac{\sqrt{3}}{3}\right)$

$\frac{\pi}{3}$

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

$\frac{\pi}{2}$

9) $\sec^{-1}(\sqrt{2})$

$\frac{\pi}{4}$