

Use the Identities to find the exact values of the expressions.

1. $\cos\left(2\arctan\frac{4}{3}\right)$

2. $\cos\left(2\arcsin\frac{1}{3}\right)$

3. $\sin\left(2\operatorname{arcsec}\left(-\frac{25}{7}\right)\right)$

4. $\tan\left(2\arcsin\left(-\frac{8}{17}\right)\right)$

5. $\sin\left(\tan^{-1}\frac{1}{2} + \tan^{-1}\frac{1}{3}\right)$

6. $\tan\left(\tan^{-1}\frac{1}{4} + \tan^{-1}\frac{3}{5}\right)$

7. $\cos\left(\sin^{-1}\frac{2}{3} + \sin^{-1}\frac{1}{5}\right)$

8. $\cos\left(\sec^{-1}\frac{3}{2} - \cos^{-1}\frac{1}{5}\right)$

9. $\sin\left(\frac{\pi}{2} + \arccos\frac{11}{13}\right)$

10. $\csc\left(\frac{\pi}{2} - \operatorname{arcsec}19\right)$

11. $\tan\left(\frac{\pi}{2} - \operatorname{arccot}2\right)$

12. $\cos\left(\frac{\pi}{2} - \arcsin0.7\right)$

Answer Bank

$$\frac{2+2\sqrt{30}}{15}$$

1

$$\frac{7}{9}$$

19

$$\frac{2\sqrt{30}-2}{15}$$

2

$$\frac{-7}{25}$$

$$\frac{\sqrt{2}}{2}$$

$$\frac{7}{10}$$

$$\frac{-336}{625}$$

$$\frac{11}{13}$$

$$-\frac{240}{161}$$