

Math 3 Advanced

KEY

Write a simplified trigonometric expression that solves the problem. Then use DESMOS to approximate the solution to three decimal places.

1. $\alpha = \sin^{-1}\left(\frac{1}{4}\right) \approx 14.5^\circ$

2. $\alpha = \tan^{-1}\left(\frac{1}{4}\right) \approx 14.0^\circ$

3. $\alpha = \sin^{-1}\left(\frac{2}{15}\right) \approx 7.66^\circ$

4. $\alpha = \tan^{-1}\left(\frac{2}{15}\right) \approx 7.59^\circ$

5. $\alpha = \sin^{-1}\left(\frac{1}{5}\right) \approx 11.5^\circ$

6. $\alpha = \tan^{-1}\left(\frac{1}{5}\right) \approx 11.3^\circ$

7. $x = 15 \tan 30^\circ \approx 8.66$

8. $x = \frac{15}{\cos 30^\circ} \approx 17.3$

9. $x = 21 \tan 15^\circ \approx 5.63$

10. $x = \frac{21}{\cos 15^\circ} \approx 21.7$