

A2.A.64: Using Inverse Trigonometric Functions 1: Use inverse functions to find the measure of an angle, given its sine, cosine, or tangent

- If $\sin x = -\frac{\sqrt{2}}{2}$ and $\cos x = \frac{\sqrt{2}}{2}$, the measure of angle x is
 - 45°
 - 135°
 - 225°
 - 315°

- If $x = \text{Arc cos}\left(-\frac{1}{2}\right)$, then x is equal to
 - 120°
 - 150°
 - 210°
 - 300°

- What is the principal value of $\cos^{-1}\left(-\frac{\sqrt{3}}{2}\right)$?
 - −30°
 - 60°
 - 150°
 - 240°

- The value of $\text{Arc sin}\left(\frac{1}{2}\right) + \text{Arc tan}(1)$ is
 - 120°
 - 105°
 - 90°
 - 75°

- If $\cos A = 0.3942$, what is the value of angle A to the *nearest minute*?
 - 23°12'
 - 23°13'
 - 66°47'
 - 67°48'

- If $\tan A = 0.4750$, find the value of A to the *nearest minute*.

- If $\sin x = 0.0935$, find the value of positive acute angle x to the *nearest minute*.

- If $\sin \theta = 0.5035$, find the value of positive acute angle θ to the *nearest minute*.

- If $\sin \theta = 0.3347$, find the measure of positive acute angle θ to the *nearest minute*.

10 What is a value of $\text{Arcsin}\left(-\frac{\sqrt{2}}{2}\right)$?

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

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

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

4) $-\frac{\pi}{2}$

11 The value of $2(\text{Arcsin } 1)$ is

1) 0

3) π

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

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

12 What is the value of x in the equation $x = 2\text{Arcsin } \frac{1}{2}$?

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

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

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

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

13 If $\theta = \text{Arc cos}\left(\frac{\sqrt{3}}{2}\right)$, what is the measure of angle θ ?

14 Find the value of $\text{Arc tan } \sqrt{3}$.

15 What is the smallest positive value of x that satisfies $x = \text{Arc cos } \frac{1}{2}$?

16 Find the value of $\text{Arcsin}\left(\frac{1}{2}\right) + \text{Arc cos}\left(\frac{\sqrt{2}}{2}\right)$.

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Answer Section

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| 1 | ANS: 4 | PTS: 2 | REF: 089932siii |
| 2 | ANS: 1 | PTS: 2 | REF: 089528siii |
| 3 | ANS: 3 | PTS: 2 | REF: 081007a2 |
| 4 | ANS: 4 | PTS: 2 | REF: 019021siii |
| 5 | ANS: 3 | PTS: 2 | REF: 068722siii |
| 6 | ANS:
25°24' | | |
| | PTS: 2 | REF: 068011siii | |
| 7 | ANS:
5°22' | | |
| | PTS: 2 | REF: 088413siii | |
| 8 | ANS:
30°14' | | |
| | PTS: 2 | REF: 018613siii | |
| 9 | ANS:
19°33' | | |
| | PTS: 2 | REF: 018914siii | |
| 10 | ANS: 2 | PTS: 2 | REF: 010911b |
| 11 | ANS: 3 | PTS: 2 | REF: 018626siii |
| 12 | ANS: 3 | PTS: 2 | REF: 080224siii |
| 13 | ANS:
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| 14 | ANS:
60° | | |
| | PTS: 2 | REF: 018713siii | |
| 15 | ANS:
60° | | |
| | PTS: 2 | REF: 068903siii | |
| 16 | ANS:
75° | | |
| | PTS: 2 | REF: 088908siii | |