

_____ 2. Find the **exact** value of $\cos\left(\sin^{-1}\frac{-4}{7}\right)$.

_____ 3. **Exactly** find the $\sin 2x$ if $\tan x = \frac{-5}{8}$ and $\sin x < 0$.

4. Verify the identity: $\cos \theta \cot \theta + \sin \theta = \csc \theta$

_____ 5. By using appropriate formulas, find the **exact** value for $\cos \frac{13\pi}{12}$.

7. Solve triangle(s) ABC if $\angle A = 42^\circ$, $a = 23$ and $b = 32$. If needed, round to two decimal places.

_____ $\angle B$

_____ $\angle C$

_____ c

9. Let $\mathbf{u} = -5\mathbf{i} + 3\mathbf{j}$ and let \mathbf{v} have initial point $(2, -1)$ and terminal point $(1, 8)$.

_____ a. Find the angle, in degrees to two decimal places, of the angle between \mathbf{u} and \mathbf{v} .

$x =$ _____ 10. Exactly solve $\tan x \cos x - \frac{\sqrt{2}}{2} \tan x = 0$ on the interval $[0, 2\pi)$.

_____ 1. Find the **exact** value of

$$\sin\left(\sin^{-1}\left(\frac{-3}{5}\right) - \cos^{-1}\left(\frac{12}{13}\right)\right).$$

_____ 3. **Exactly** find $\sin 2x$ if $\tan x = \frac{4}{9}$ and $\cos x < 0$.

$\mathbf{u} =$ _____ 4. Find the unit vector \mathbf{u} in the direction of $\mathbf{v} = \mathbf{i} - 8\mathbf{j}$.

5. Solve triangle(s) ABC if $\angle B = 54^\circ$, $a = 42$ and $b = 38$. If needed, round to two decimal places.

_____ $\angle A$

_____ $\angle C$

_____ c

_____ 7. By using appropriate formulas, find the **exact** value for $\sin \frac{23\pi}{12}$.

_____ 9. Let $\mathbf{u} = \langle 2, -4 \rangle$ and let \mathbf{v} have initial point $(-3, 1)$ and terminal point $(5, 6)$. Find the angle, in degrees to two decimal places, of the angle between \mathbf{u} and \mathbf{v} .

$\theta =$ _____ 10. Exactly solve $2\cos^2 \theta + \sin \theta = 2$ on the interval $[0, 2\pi)$.