

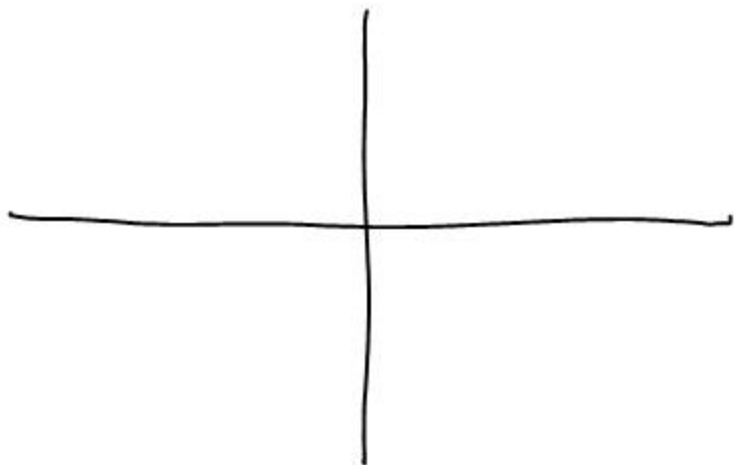
HW Quiz 12-5-18

$$\sec \theta = \frac{-25}{7}, \quad \pi < \theta < 2\pi$$

a) $\sin \theta =$

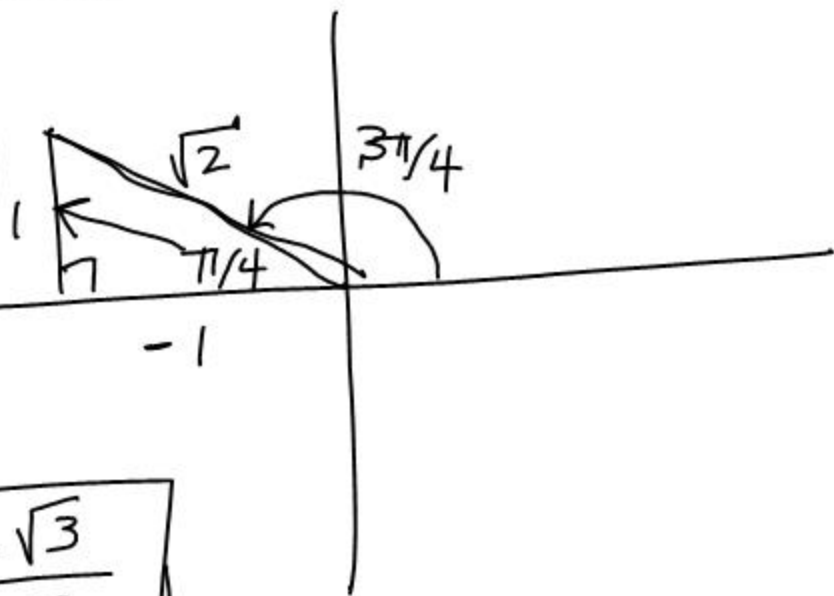
b) $\cos \theta =$

c) $\tan \theta =$

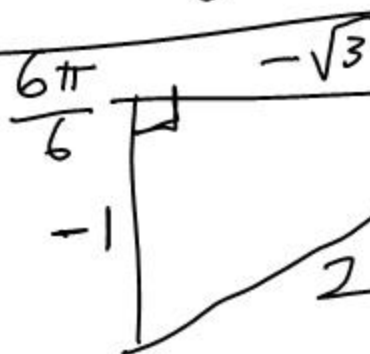


① $\sin \frac{3\pi}{4} = \frac{1}{\sqrt{2}}$

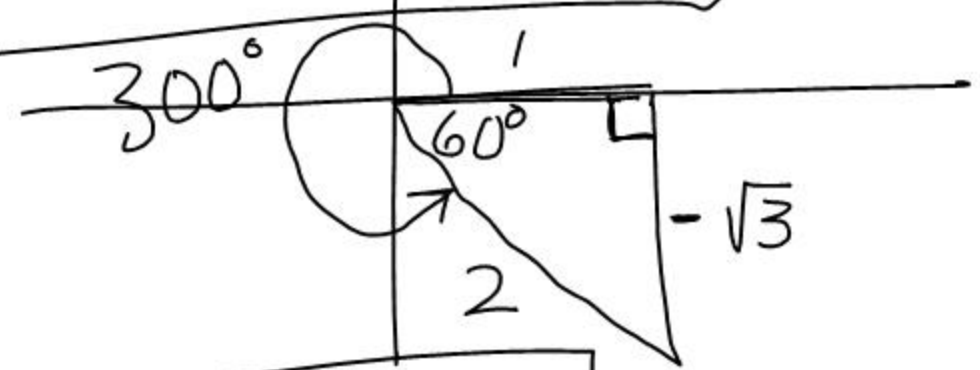
$$\frac{4\pi}{4} = \pi$$



② $\cos \frac{7\pi}{6} = \frac{-\sqrt{3}}{2}$

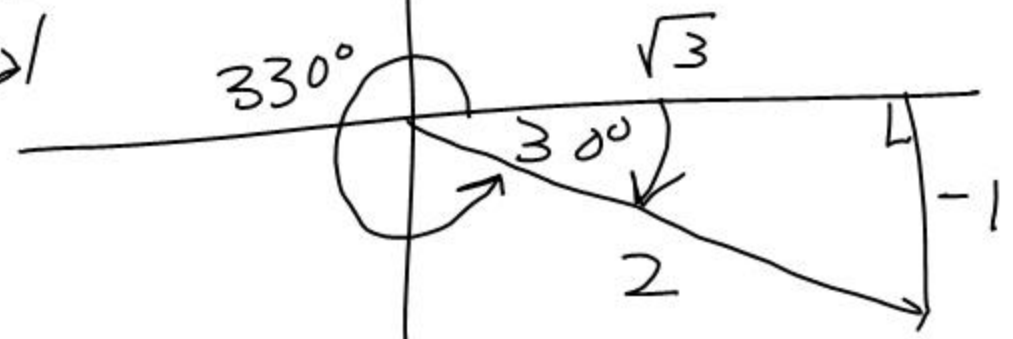


$$\textcircled{3} \tan 300^\circ = \frac{-\sqrt{3}}{1} = -\sqrt{3}$$



$$\textcircled{4} \sec(-30^\circ) = \frac{2}{\sqrt{3}}$$

reciprocal
of
cosine



$$\sec(-30^\circ) = \sec(330^\circ)$$

Triangle Trigonometry

not a right Δ

Right
Triangle
Trig.

Oblique Triangle
trig

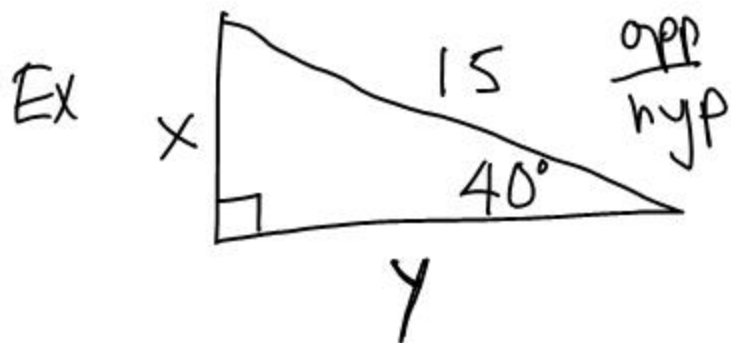
Know
1 side
and 1 angle

Know
2 sides

SSS or
SAS

ASA or
SSA

Right Δ trig: Given 1 side
and 1 acute angle



$$\frac{x}{15} = \sin 40^\circ$$

$$x = 15 \cdot \sin 40^\circ$$

$$\underline{x = 9.64}$$

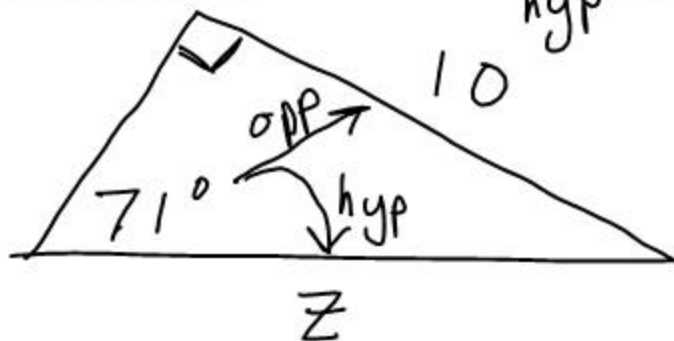
$$\frac{y}{15} = \cos 40^\circ$$

$$y = 15 \cdot \cos 40^\circ$$

$$y = 11.5$$

$$\cancel{z \left(\frac{10}{z} \right) = 15 z}$$

Ex.



$$\cancel{z \left(\frac{10}{z} \right) = \sin 71^\circ \cdot z}$$

$$10 = z \cdot \sin 71^\circ$$

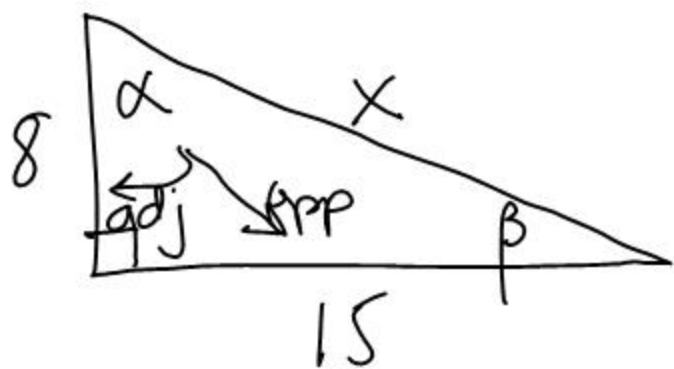
$$\sin 71^\circ$$

$$\cancel{\sin 71^\circ}$$

$$z = 10.6$$

Right Δ trig: Given 2 sides

Ex.



$$\begin{aligned}8^2 + 15^2 &= x^2 \\64 + 225 &= x^2 \\289 &= x^2\end{aligned}$$

$$\tan \alpha = \frac{15}{8}$$

$$\boxed{17 = x}$$

$$\alpha = \tan^{-1}\left(\frac{15}{8}\right) = 61.9^\circ$$

$$\beta = 90^\circ - 61.9^\circ = 28.1^\circ$$