

Section 4.3 Extra Practice

- What is the exact value of each trigonometric ratio?
 a) $\sin 30^\circ$ b) $\cos 240^\circ$ c) $\tan 315^\circ$
 d) $\sin 270^\circ$ e) $\csc 60^\circ$ f) $\sec 180^\circ$
- Determine the exact value of each of the following.
 a) $\cot \frac{\pi}{3}$ b) $\sin \frac{7\pi}{6}$ c) $\sec \pi$
 d) $\cos \pi$ e) $\tan \frac{\pi}{3}$ f) $\csc \frac{3\pi}{4}$
- Determine the approximate value for each trigonometric ratio to the nearest hundredth of a unit.
 a) $\sin 40^\circ$ b) $\cos 215^\circ$
 c) $\cot 337^\circ$ d) $\tan (-50^\circ)$
- Determine the approximate value for each. Give answers to the nearest hundredth of a unit.
 a) $\sec 2.5$ b) $\tan \left(-\frac{\pi}{5}\right)$
 c) $\csc \frac{3\pi}{7}$ d) $\sin 0.75$
- In which quadrant will θ terminate if angle θ is in standard position with the given conditions?
 a) $\cos \theta < 0$
 b) $\sin \theta > 0$
 c) $\cot \theta > 0$
 d) $\cos \theta > 0$ and $\cot \theta < 0$
 e) $\sin \theta < 0$ and $\sec \theta > 0$
 f) $\sec \theta < 0$ and $\tan \theta < 0$
- Express each quantity as the same trigonometric ratio using its reference angle. For example, $\cos 160^\circ = -\cos 20^\circ$.
 a) $\sin 230^\circ$ b) $\cos 310^\circ$ c) $\tan 100^\circ$
 d) $\csc 260^\circ$ e) $\cot 200^\circ$ f) $\sec 290^\circ$
- Determine the exact measure of all angles that satisfy the given conditions.
 a) $\tan \theta = -1$, domain $0^\circ \leq \theta < 360^\circ$
 b) $\cos \theta = \frac{\sqrt{3}}{2}$, domain $-180^\circ \leq \theta < 180^\circ$
 c) $\csc \theta = 2$, domain $-180^\circ \leq \theta < 90^\circ$
 d) $\sin \theta = 1$, domain $-360^\circ \leq \theta < 360^\circ$
- Determine the exact measure of each angle.
 a) $\sin \theta = \frac{\sqrt{3}}{2}$, domain $0 \leq \theta < 2\pi$
 b) $\sec \theta = -1$, domain $-\pi \leq \theta < 2\pi$
 c) $\cos \theta = -\frac{1}{2}$, domain $0 \leq \theta < 2\pi$
 d) $\cot \theta = -1$, domain $-\pi \leq \theta < 2\pi$
- Determine the approximate measure of each angle. Use diagrams to show the number of possible solutions and the quadrants in which they lie. Then, give answers to the nearest hundredth of a unit, where possible.
 a) $\sin \theta = 0.42$, domain $-\pi \leq \theta \leq \pi$
 b) $\cot \theta = -4.87$, domain $-\frac{\pi}{2} \leq \theta \leq \pi$
 c) $\sec \theta = 4.87$, domain $-360^\circ \leq \theta < 180^\circ$
 d) $\tan \theta = 1.5$, domain $-180^\circ \leq \theta < 360^\circ$
- The point $D(5, -12)$ lies on the terminal arm of an angle θ in standard position. What is the exact value of each trigonometric ratio for θ ?

