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## Chapter 1 Standards

| 1a | Use the Pythagorean Theorem to find missing sides in a right triangle |
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| 1b | Use the sine, cosine, and tangent functions to find missing sides in a right triangle |
| 1c | Use the inverse sine, cosine, and tangent functions to find missing angles in a right triangle |
| 1d | Apply Standards 1a, 1b, and 1c to solve mathematical models involving right triangles (real-world <br> problems) |
| 1e | Find missing sides and angles of an oblique triangle using the Law of Cosines |
| 1f | Find missing sides of an oblique triangle using the Law of Sines |
| 1g | Use the Laws of Cosines and Sines to solve mathematical models involving triangles (real world <br> problems). |

## Chapter 2 Standards

| 2 a | Draw angles that are negative or are larger than $180^{\circ}$. |
| :--- | :--- |
| 2 b | Find the quadrant and reference angles of a given angle in standard position. |
| 2 c | Given a point or the quadrant of the terminal side of an angle, find the six exact trigonometric <br> values. |
| 2 d | Convert between radians and degrees. |
| 2 e | Apply 30-60-90 and 45-45-90 triangle dimensions to the unit circle |

1. Identify the quadrant and find the reference angle for $\theta$ whose measure is $-425^{\circ}$.
2. Convert $-\frac{15 \pi}{4}$ to degrees.
3. If $\csc \theta=-\frac{41}{9}$ and $\theta$ terminates in QIII, state the other 5 exact trig values. Show sketch and work below.
$\begin{array}{lll}\sin \theta= & \cos \theta= & \tan \theta= \\ \csc \theta=-\frac{41}{9} & \sec \theta= & \cot \theta=\end{array}$

|  | $0^{\circ}$ | $30^{\circ}$ | $45^{\circ}$ | $60^{\circ}$ | $90^{\circ}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\theta^{\mathrm{rad}}$ | $0^{\mathrm{rad}}$ |  |  |  |  |
| $\sin \theta$ |  | $\frac{1}{2}$ |  | $\frac{\sqrt{3}}{2}$ |  |
| $\cos \theta$ |  | $\frac{\sqrt{3}}{2}$ | $\frac{\sqrt{2}}{2}$ |  |  |

4. Using the special angles shown in the table above, find the reference angle for $\theta$ in $\# 2$ and use it to find the sine, cosine, and tangent of $\theta$. Express your reference angle answer in radians.
5. Find the two (radian) values for $0<\theta<2 \pi$ and for which $\sin \theta=-\frac{1}{2}$
6. Using your calculator, find all possible degree values for which $\sec \theta=-1.192363293$
7. Given $\triangle K L M$, in which $k=2, m=3$, and $m \angle L=62^{\circ}$, find $l$.
8. 


9) Find the height of the tree

10) Given $\triangle P D Q$, in which $\angle Q=58^{\circ}, \angle P=82^{\circ}, d=25$, find $p, q, \angle D$

