AP Calculus AB | Activity 0903 | Name:
Dr. Paul L. Bailey | Tuesday, September 3, 2024

Problem 1. Find the radian measure of $108°$.

Problem 2. Find the degree measure of $\frac{11\pi}{12}$.

Problem 3. If $\sin\theta = \frac{3}{7}$, what is $\cos\theta$?

Problem 4. Jane and Michael are flying a kite. The string is 300 feet long, and the angle the string makes with the ground is $36°$. How high is the kite?

Problem 5. A baby groundhog bravely leaves her hole, cautiously crawls west for 4 meters, then sees an owl, becomes terrified and in a blind panic, runs south for 9 meters. How far is she from her hole?

Problem 6. Find the reference number (in degrees) of $x = 1000°$.

Problem 7. Find the reference number (in radians) of $t = -\dfrac{11\pi}{6}$.

Problem 8. Find the terminal point $W(t)$ determined by $t = \dfrac{\pi}{3}$.

Problem 9. Find $W\left(\dfrac{31\pi}{4}\right)$.

Problem 10. We wanted to estimate the height of a giant sequoia in the distance. We moved until, from where we stood, the angle the top of the tree made with the ground was 30°. One of us counted the paces to the tree, and came up with 522 feet. How tall was the tree?