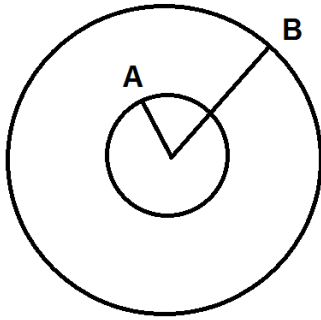


YOUR NAME: _____

George Voutsadakis

Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Two concentric rotors, one of radius 2 feet and another of radius 5 feet, are hooked on the same motor and, therefore rotated at the same angular speed. If the linear velocity of point B is 1000 ft/min, what is the linear velocity of point A?



2. Suppose that, in a right triangle $\sec \theta = \frac{7}{4}$. Find the three numbers $\sin \theta$, $\cos \theta$ and $\cot \theta$.