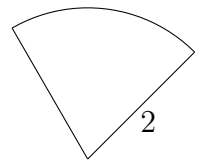


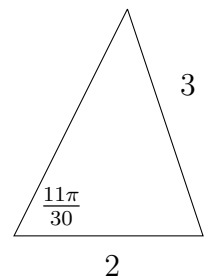
You will have at least 20 minutes to complete the quiz. You may use a calculator for computations, but you must show your work. If you cannot complete a problem, show as much of your thought process as possible.

1. [3 pts] On a circle of radius $\frac{1}{2}$, what is the arc length traversed by an angle of $\pi/7$?

2. [3 pts] Find the angle α below. Assume the length of the arc is 2.62 units.



3. [6 pts] Fill in the missing angles and sides of the triangle shown below.



4. [4 pts] Suppose you travel due east for 13 kilometers, and then you head 5 kilometers in a direction 40° south of east. How far have you traveled?
5. [4 pts] Consider an isosceles triangle where the two equal sides are a length of 4 and the angle between the equal sides is 30° . What is the length of the final side?