Animal Face Off: Otter vs Pufferfish

Otter Jaws

Pufferfish

Gape Angle ANgl

1. The otter’s jaws are tangent to the pufferfish. For the arcs, ***x*1** and ***x*2** represent arc measurements in degrees. What is the measurement of ***x*1 + *x*2**?
2. Write an equation relating ***x*1** and ***x*2** to the measurement of ∠ABC.
3. Use your answers to the previous questions to find ***x*1** and ***x*2**.
4. Draw AC and label its midpoint H. Draw DB.
5. Name every triangle drawn in the picture that is similar to △ BHA.
6. Find the radius, ***r***, of the circle to two decimal places.
7. What is the diameter of the largest pufferfish that this otter can eat?