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 the measurements of the arcs in degrees. What is ***x*1 + *x*2** ?

Answer: 360⁰

1. Write an equation relating ***x*1** and ***x*2** to the measurement of angle ABC.

Answer: (*x*1 – *x*2) ÷ 2 = 46⁰

1. Use your answers to the previous questions to find ***x*1** and ***x*2** .

Answer: *x*1 = 226⁰ and *x*2 = 134⁰

1. Draw AC and label its midpoint H. Draw DB.

 

1. Name every triangle drawn in the picture that is similar to △ BHA.

Answer: △BHC, △AHD, △CHD, △BAD, △BCD

1. Find the radius, ***r***, of the circle to two decimal places.

Answer: *r* is approximately 3.82 cm

1. What is the diameter of the largest pufferfish that this otter can eat?

Answer: approximately 7.64 cm