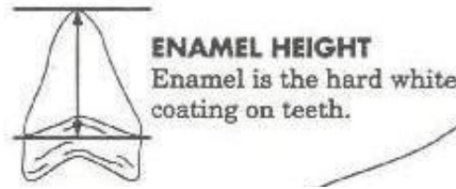


Estimating Shark Size Based on Teeth

Part I:

How to measure a shark tooth.



Part II:

Calculating size of the shark based on tooth size.

To calculate the size of the tooth you take the enamel high in **inches** and multiply that by 10 to get the estimated length in feet.

Sometimes we do not measure in inches, we measure in centimeters so we need to convert!

$$1\text{in}=2.54\text{cm}$$

Example: If a sharks' tooth is 1.56cm estimate how long the shark' s body is.

Step 1: Convert from centimeters to inches

$$\frac{1.56\text{cm}}{1} * \frac{1\text{in}}{2.54\text{cm}} = \frac{1.56\text{cm}*\text{in}}{2.54\text{cm}} = \frac{1.56}{2.54}\text{in} = 0.61417\text{in} = 0.614\text{in}$$

Step 2: Multiple the height of the shark tooth in inches by 10.

$$0.614\text{in} * 10 \left(\frac{\text{ft}}{\text{in}}\right) = 6.14\text{feet}$$

Step 3: Answer

Estimated Shark Length = 6.12feet

Estimate the size of the shark given it' s tooth height

1. Shark Tooth Height= 2.12cm

Divide By 2.54: _____

Multiple by 10: _____

Answer: _____

2. Shark Tooth Height= 1.25cm

Divide By 2.54: _____

Multiple by 10: _____

Answer: _____

*MOVING ON TRYING SETTINGUP YOUR OWN WORK

3. Shark Tooth Height= 1.65cm

4. Shark Tooth Height= 0.75cm

5. Shark Tooth Height= 1.98cm

6. Shark Tooth Height= 2.01cm

Now let' s try working backwards: Given the length of a shark estimate the size of its tooth.

7. Length = 6ft (answer in inches)

The opposite of multiplying id dividing so:

Divide by 10: _____

Answer: _____

8. Length = 12.5ft (answer in inches)

9. Length = 13.2ft (answer in cm)

Divide by 10: _____

Multiply by 2.54: _____

Answer: _____

Challenge Questions:

1in = 2.54 cm

1ft = 0.3cm

10. What is the estimated length of a shark whose tooth is 1.66cm? Report answer in meters.