The weight of an iceberg is modeled by the equation $h(x) = 200000(0.81)^x$ Where x is time in years and h(x) is the weight in tons

1. Initial amount of ice?

- 2. Is the iceberg gaining weight or losing weight?
 - 3. What is the rate of decay/growth?
 - 4. In 20 years, how much ice exists?
 - 5. When will half the ice remain?

1. Initial amount of ice? 200,000 tons

2. Is the iceberg gaining weight or losing weight? Decaying (the "b" value is less than one) 3. What is the rate of decay/growth? **Rate of Decay is 19%** 4. In 20 years, how much ice exists? 2956.177 tons 5. When will half the ice remain? **3.289 years**

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$y = 2621(1.035)^x$

Use your model to predict when the population will be about 10,000.

A group of students head to the Carolina Ale House for an afternoon snack of cheese fries. The fries weighed 4 pounds when the students began eating them at a rate of 2.3% per minute. Find a model for the amount of fries that remain after each minute.

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$y = 4(0.977)^x$

Use your model to predict when there will be 0.5 pound left.