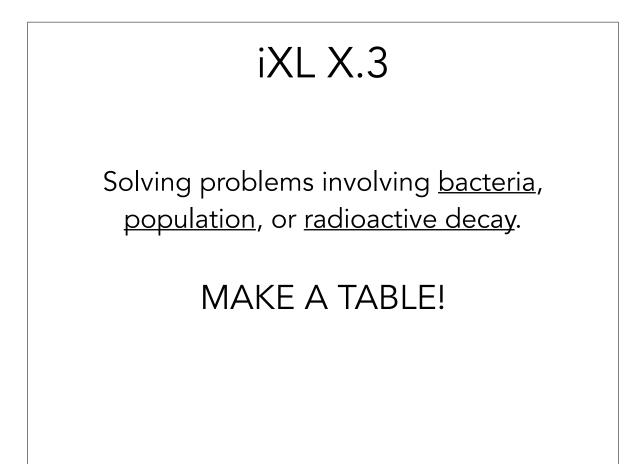
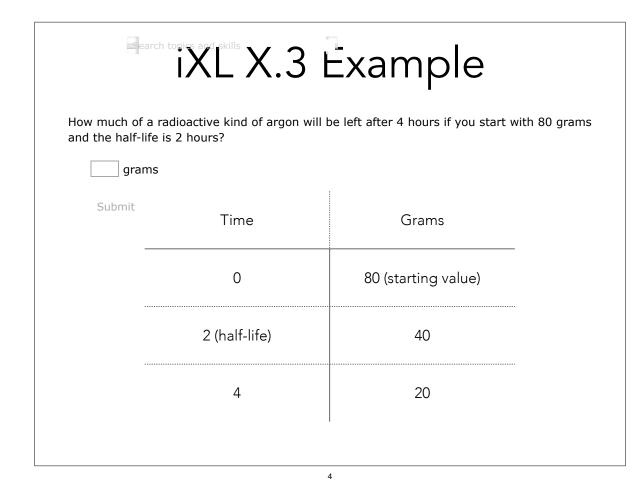
IXL X.3 Types of Problems • Bacteria • Population • Radioactive Decay • Exponential Growth/Decay



iXL X.3				
Time	Population, Bacteria, or Grams			
0	(starting value)			
(growth or decay time)				



iXL X.3

Solving problems involving exponential growth/decay.

DETERMINE IF IT IS INCREASING, DECREASING, OR ASKING FOR THE INTEREST!

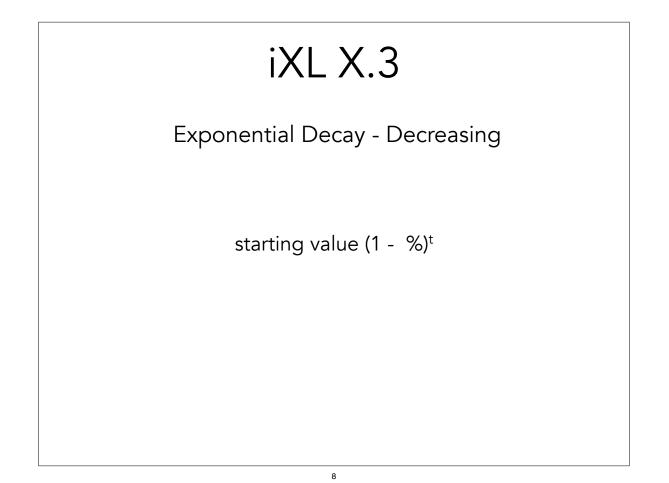
iXL X.3

5

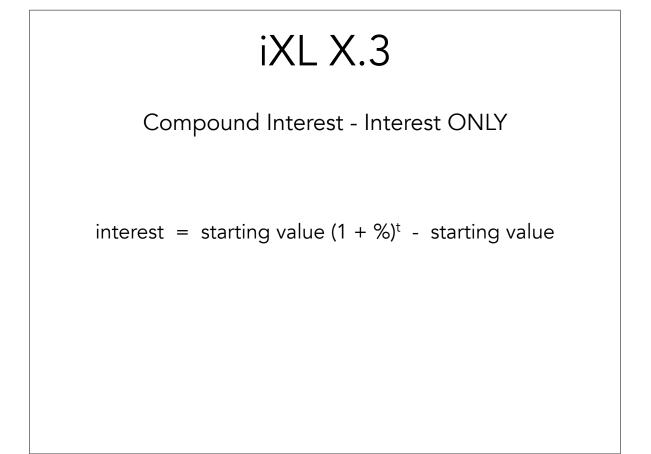
Exponential Growth - Increasing

starting value (1 + %)^t

i	XL X.3 Example		
	opics and skills		
Ex	kponential Growth - Increasing		
Lester has \$10 in	a savings account. The interest rate is 10%, compounded annually.		
To the nearest cer	nt, how much will he have in 2 years?		
\$			
starting value (1 + %) ^t			
Submit	$10(1 + .10)^2$		
10 (1.10) ²			
	10 (1 + .10) ²		
	\$12.10 total after 2 years.		
	7		



i	XL X.3 Example
	cs and skills ponential Decay - Decreasing
, ,	a cup of coffee to help her stay awake. The coffee had 95 milligrams of body processes 15% of the caffeine every hour, how much will be left in 3
If necessary, round	your answer to the nearest tenth.
m	illigrams
Submit	starting value (1 - %) ^t
	95 (115) ³
	95 (.85) ³
	58.3 milligrams
	-



iXL X.3 Example				
Compound Interest	- Interest ONLY			
Layla has \$90 in a savings account that earns 10% interest, compounded annually.				
To the nearest cent, how much interest will she earn in 2 years?				
\$				
starting value (1 + %) ^t	Find the interest.			
^{Submit} 90 (1 + .10) ²	\$108.90 total			
90 (1.10) ²	- \$90 original			
90 (1 + .10) ²	= \$18.90 interest			
\$108.90 total after 2 years.	\$18.90 interest earned.			