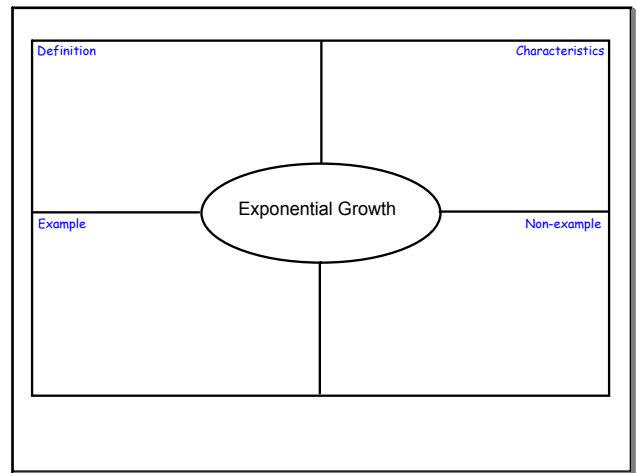


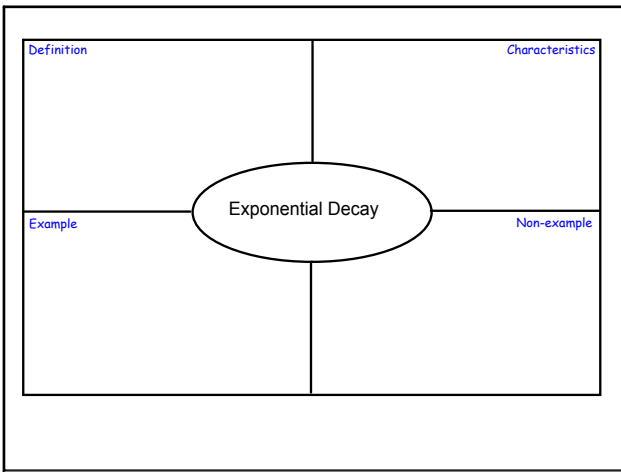
Section 11-3 continued...you do not need to add anything to your table of contents. Turn to the page you were using yesterday.

Review of Exponential Growth & Decay

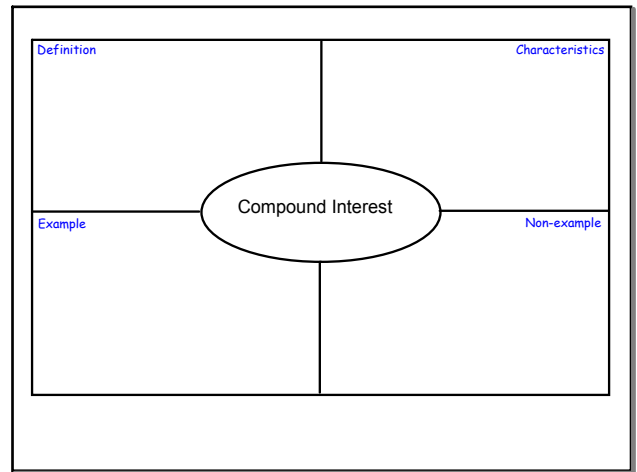
Feb 25-2:02 PM



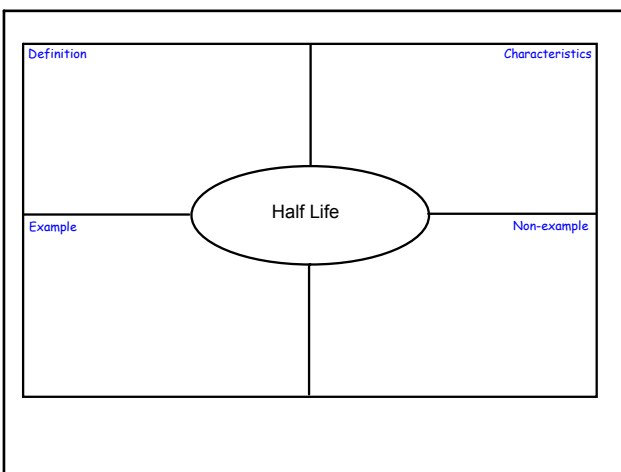
Feb 21-8:16 AM



Feb 21-8:16 AM



Feb 21-8:16 AM



Feb 21-8:16 AM

How do you know if it is growth or decay?

Identify each function as an exponential growth or decay. Then give the rate of growth or decay as a percent.

1. $f(t) = 400(1.32)^t$ <i>growth</i>	2. $p(x) = 37(1.02)^x$ <i>growth</i>
3. $p(t) = 1050(0.82)^t$ <i>decay</i>	4. $m(t) = 90\left(\frac{1}{4}\right)^t$ <i>decay</i> <u>.25</u>

Feb 28-7:50 AM

The number of employees at Equation Inc. is 1440 and is increasing at a rate of 1.5% per year.

Is the company experiencing exponential growth or exponential decay?

Write a function to model this situation.

$$F(t) = 1440(1.015)^t$$

Find the number of employees in the company after 9 years.

$$F(9) = 1440(1.015)^9$$

Feb 24-8:27 PM

The deer population of a game preserve is decreasing by 2% per year. The original population was 1850.

Is the deer population experiencing exponential growth or exponential decay?

Write a function to model this situation.

$$F(t) = 1850(0.98)^t$$

Find the deer population after 4 years.

$$F(t) = 1850(0.98)^4$$

Feb 24-8:27 PM

\$1200 invested at a rate of 3.5% and is compounded quarterly.

Write the compound interest function for this situation.

$$F(t) = 1200\left(1 + \frac{0.035}{4}\right)^{4t}$$

Find the balance after 4 years.

Feb 24-8:24 PM

Cesium-137 has a half-life of 30 years.

Find the amount of cesium-137 left from a 100 milligram sample after 180 years.

$$F(t) = 100(0.5)^{\frac{t}{30}}$$

$$F(180) = 100(0.5)^{\frac{180}{30}}$$

Feb 24-8:31 PM

Bismuth has a half-life of 5 days.

Find the amount of bismuth left from a 100-gram sample after 5 weeks.

**Hint:**

Feb 24-8:34 PM

\$4000 invested at a rate of 3% compounded monthly.

Write the compound interest function for this situation.

Find the balance after 8 years.

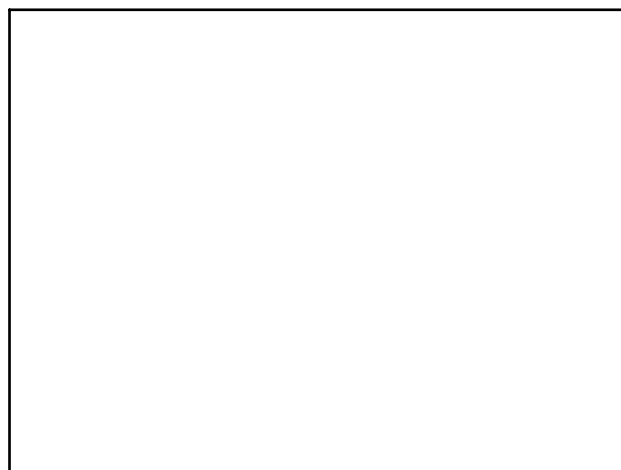
Feb 24-8:28 PM

Assignment:

Page 785  $F(t) = \underline{\hspace{2cm}}$   
#10-32 EVENS  $F(b) = \underline{\hspace{2cm}}$   
38, ~~45-47~~  $F(b) = \underline{\hspace{2cm}}$

10-28 evens  
38

Feb 24-8:36 PM



Feb 27-10:10 AM