

Bring this completed sheet with you to class on the due date to be handed in at the beginning of the period.

- The word *parameter* is first introduced in Section 1.5 on page 35.
Which is true about the parameter b for the exponential function $y = ab^x$? (Select **ALL** possible answers)
 - It is the growth factor.
 - It is the average rate of change.
 - It determines whether the graph is increasing or decreasing
 - It affects how steep the graph climbs or falls.
- For the exponential function $y = ab^x$, what does the parameter a tell you?
- The definition of a **horizontal asymptote** is given in this section in the blue box on page 124. Read this blue box, and the discussion preceding it, about the horizontal line $Q = 0$. Then complete the boxes below.
What notation is used to indicate values of x which become large and **negative**? $x \rightarrow$

What notation is used to indicate values of x which become large and **positive**? $x \rightarrow$
- Examples 2 and 3 show how to solve exponential functions graphically. After you read these examples, solve the equation $2300(1.12)^t = 10^6$ graphically. Report the solution accurate to two decimal places: ____ . ____
- Examine the functions P , Q , and R in Section 3.4 Example 1 written in the form $P = ae^{kt}$.
 - For the function P , what is the value of k ? _____
Is P increasing or decreasing? _____
 - For the function Q , what is the value of k ? _____
Is Q increasing or decreasing? _____
 - For the function R , what is the value of k ? _____
Is R increasing or decreasing? _____
- Each of the functions P , Q , and R in Section 3.4 Example 1 can be written in the form $a(b)^t$ for some numbers a and b . If so, what would be the value of a ? _____
- Each of the functions P , Q , and R in Section 3.4 Example 1 can be written in the form $a(b)^t$ for some numbers a and b .
Give the value of b for $P = 5e^{0.3t}$ (round to two decimal places) _____
Give the value of b for $Q = 5e^{0.2t}$ (round to two decimal places) _____
Give the value of b for $R = 5e^{-0.2t}$ (round to two decimal places) _____
- Suppose **Account A** pays 52% interest once per year. (OK, use your imagination.)
Account B pays 1% interest every week. (Note there are 52 weeks in a year.)
Without a calculator, decide which account is better after 1 year.
 - Account A
 - Account B
 - Both the same.