Algebra 2 w/ Trig

4.3 Use Functions Involving e

Warm-Up:

**Simplify the expression.**



**4. An account with a balance of** $1000 **pays** 3.65% **annual** **interest compounded daily. What is the balance at the end of** 1 **year if no money is added to the principal?**

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Example 1: Simplify Natural Base Expressions



Example 2: Evaluate natural base expressions

YOU TRY:

Simplify the following expressions.





Example 3: Graph natural base functions

**Graph the function. State the domain and range.**



Example 4: Solve a Multi-Step Problem

**The length *l*** (in centimeters) **of a tiger shark can be modeled by the function**

**where** *t* **is the shark’s age** (in years)**. Use the graph to estimate the length of a tiger shark that is** 3 years **old.**

YOU TRY:

Graph the following. State the domain and range.





 Example 5: Model Continuously Compounded Interest

**You deposit** $4000 **in an account that pays** 6% **annual interest compounded continuously. What is the balance after** 1 **year?**

YOU TRY:

**9. FINANCE:** **You deposit** $2500 **in an account that pays** 5% **annual interest compounded continuously. Find the balance after each amount of time?**

**a.** 2 **years b. 5 years**

**10. FINANCE: Find the amount of interest earned in parts (a) – (c) of Exercise** 9**.**

a. b.

KEEP GOING:









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