Chapter 7 Exponential Logarithmic Functions

7.0 Pre-assessment

Match each of the vocabulary terms on the left with the appropriate letter and definition on the right.

1. .
2. .
3. .
4. .
5. .

A.

B.

C.

D.

E.

F.

Evaluate each expression.

6. .
7. .
8. .
9. .

Evaluate each expression for the given value of the variable.

10. .
11. .
12. .
13. .

Multiply or divide.

14. .
15. .
16. .
17. .

10. 11. 12. 13. 14. 15. 16. 17.

1. 2. 3. 4. 5. 6. 7. 8. 9.

7.1 Exponential Functions, growth and Decay

Objective: Write and evaluate exponential expressions to model ggrowth and decay situations.

Definition 7.1.1.

Example 1.

(a)

(b)

Example 2.

(a)

(b)

(a)

(b)

7.1 (day 1) Homework: page

Exponential Functions (day 2)

Objective: Write and evaluate exponential expressions to model ggrowth and decay situations.

You Try It! 1.

(a)

(b)

Example 3.

(d)

(b)

Example 4.

(a)

(b)

(c)

(d)

7.1 (day 2) Homework: page

7.2 Inverse of Relations and Functions

Objective: Graph and recognize inverses of relations and functions. Find Inverses of functions

Example 1.

(a)

(b)

Example 2.

(a)

(b)

Example 3.

7.2 Homework (day 1): page

7.3 Logarithmic Functions

Objective: Write equivalent forms for exponential and logarithmic functions.

Example 1.

(a)

You Try It! 2.

(b)

Example 2.

(a)

(b)

Example 3.

(a)

(b)

Example 4.

(a)

(b)

7.3 (day 1) Homework: page

7.3 (day 2)

Objective: Write, evaluate, and graph logarithmic functions.

You Try It! 3.

(a)

(b)

Example 5.

(a)

(b)

Example 6.

(a)

(b)

7.3 (day 2) Homework: page

7.4 Properties of Logarithms

Objective: Use properties to simplify logarithmic expressions.

Example 1.

(a)

(b)

Example 2.

(a)

(b)

You Try It! 4.

(a)

(b)

7.4 (day 1) Homework: page

7.4 (day 2) Properties of Logarithms

Objective: Translate between logarithms in any base.

Example 3.

(a)

(b)

You Try It! 5.

(a)

(b)

7.4 (day 2) Homework: page

7.6 The Natural Base, e

Objective: Use the number e to write and graph exponential functions representing real-world.

Example 1.

(a)

(b)

You Try It! 6.

(a)

(b)

Definition 7.6.1.

Example 2.

(a)

(b)

7.6 Homework (day 1): page

7.6 The Natural Base, e (day 2)

Objective: Solve equations and problems involving e or natural logarithms.

Example 3.

Example 4.

(a)

(b)

7.6 Homework (day 2): page

7.7 Transforming Exponential and Logarithmic Functions

Objective: Transform exponential and logarithmic functions by changing parameters..

Example 1.

(a)

(b)

Example 2.

(a)

(b)

7.7 Homework (day 1): page

7.7 Transforming Exponential and Logarithmic Functions (day 2)

Objective: Describe the effects of changes in the coefficients of exponential and logarithmic functions.

Example 3.

(a)

(b)

Example 4.

Example 5.

7.7 Homework (day 2): page

Chapter 7 Review (day 1)

1. .

2. .

3. .

4. .

5. .

6. .

7. .

8. .

9. .

10. .

11. .

12. .

13. .

14. .

15. .

16. .

Ch 7 Review (day 2)