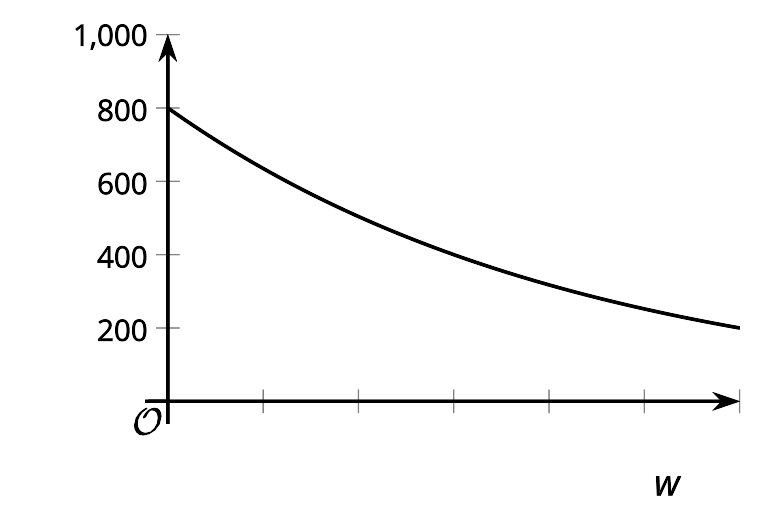
## Unit 4 Lesson 10 Cumulative Practice Problems

* 1. Use the base-2 log table (printed in the lesson) to approximate the value of each exponential expression.
  2. Use the base-2 log table to find or approximate the value of each logarithm.

1. Here is a logarithmic expression: .
   1. How do we say the expression in words?
   2. Explain in your own words what the expression means.
   3. What is the value of this expression?
   4. What is ? What about ?
   5. What is ? What about ?
   6. Express as a power of if .
2. In order for an investment, which is increasing in value exponentially, to increase by a factor of 5 in 20 years, about what percent does it need to grow each year? Explain how you know.

* (From Unit 4, Lesson 4.)

1. Here is the graph of the amount of a chemical remaining after it was first measured. The chemical decays exponentially.

* 
* What is the approximate half-life of the chemical? Explain how you know.
* (From Unit 4, Lesson 7.)

1. Find each missing exponent.

* (From Unit 4, Lesson 8.)

1. Explain why .

* (From Unit 4, Lesson 9.)

1. How are the two equations and related?

* (From Unit 4, Lesson 9.)



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