

Go over quiz problems.

Lesson 5. Various topics

Activity 1. p. 261. **What if the growth triples instead of doubles? Or decreases by $\frac{2}{3}$ in each time period? What do those patterns of growth look like?**

1. Sketch a graph of the first two, then look at the one on the projector.
2. Sketch a graph of the last two, then look at the one on the projector.
3. Work with two other students. Each of you write answers for these.

The geometric mean, page 263.

1. Answer the first question with pencil in front of it. It asks for two numbers. What are they?
2. Now look at the data in the middle of the page for year and amount. They tell you that it is exponential. But you don't have to take their word for it. How do you show it is exponential? (Recall "common ratio." Do that.)
3. Now, since you see that there is a common ratio here, recall how we did Lesson 3, p. 245, problem 4. Find a formula for this problem in the same way. (Let x = number of decades. Then $A = 2.08^x$)
4. So we can find the amount at years = 15 by changing years = 15 to $x = 1.5$. And then $A = 2.08^{1.5}$. Find that.
5. And, as we just learned, we can also find the amount at years = 15 by taking the geometric mean of the amount at years = 10 and the amount at years = 20. Find that.
6. Continue to page 264, verifying that the graph is correct for this set of data.
7. Answer the two questions with pencils in front on the top half of this page.

Standardizing on base 10, page 264.

1. Look at the data in this section.
2. Answer the question with a pencil in front. What is the common ratio?
3. Do Activity 3, problem 1.
4. Activity 3, problem 2. Compute three values. See the projected table for the rest and then answer the question at the end of the page.
5. Activity 3, problem 3. Use the projected graph to answer these questions.

Standardizing on base e, page 266.

Read this. We will not do much with this, but it is sometimes useful to know that this is one of the standard bases used in real-world problems.

Homework: pages 267-270: 1, 2, 6, 11, 12, 13, 17, 18

Quiz: pages 267-270: 3, 4, 5, 7, 10