

Assessment Worksheet for the Great Pyramid

Name _____

The ratio of the change in a quantity, A, to a change in a related quantity, B, is called the **rate of change** of A. Calculate the rate of change of A by dividing the change in A by the change in B.

The rate of change is very important in analyzing functions. You will work with rate of change using the TI-Nspire and exploring the “Great Pyramid” and what the Pharaoh has suggested for Time and Feet for the “Great Pyramid”. Use the TI-Nspire to assess your learning and open the TNS document “Great Pyramid”.

1. How much time has been allotted in each Phase?
 - A. Phase 1
 - B. Phase 2
 - C. Phase 3
 - D. Phase 4

2. Determine the Rate of change for each Phase, written in feet and inches.
 - A. Phase 1
 - B. Phase 2
 - C. Phase 3
 - D. Phase 4

3. Using “Measure” from the Menu window, calculate the slope of each line in each Phase of the project.
 - A. Phase 1
 - B. Phase 2
 - C. Phase 3
 - D. Phase 4

4. What do you notice about the rate of change in each Phase and the calculation of slope in each Phase?

5. Why do you suppose that the rate of change is different in each Phase? Hint (Remember what you are building!)

6. How High does the Pharaoh expect the pyramid to be after the following? Use point on and calculate equations and coordinates to find these answers.
- A. 3 years?
 - B. 8 years?
 - C. 10 years?
 - D. 14 years?
 - E. 17 years?
 - F. 20 years?
7. What is the increase in height per year during each Phase?
- A. Phase 1
 - B. Phase 2
 - C. Phase 3
 - D. Phase 4
8. Calculate the rate the pyramid is rising during each phase?
9. Do the workers have an easier schedule at the beginning of the project than at the end? Is there less work to do when the rate of change is less? Using the space provided elaborate on your answer.