

Digging Dinosaurs

Level E

You are going on an expedition to dig for dinosaur fossils. In digging, you come across a small trunk left by another archeologist. In the trunk is a paper that lists how deep you need to dig to reach dinosaur fossils. Unfortunately, something spilled on part of the paper and it is damaged. You look at the data and say, “Well, the functional relationship should not be linear. I think the difference in the depth diminishes as one digs deeper.”

Years ago, by thousands	Feet to dig
10,000	14
20,000	22
30,000	30
40,000	
70,000	

Determine a functional relationship that approximates the data in the table and continues to increase, but by an ever-decreasing rate of change.

Explain the function and generalize it.

Use your function to determine the depth you would need to dig at that location to uncover a fossil from the Jurassic era 200 million years ago. How deep would you need to dig?

Explain whether your answer seems reasonable.

