**9.*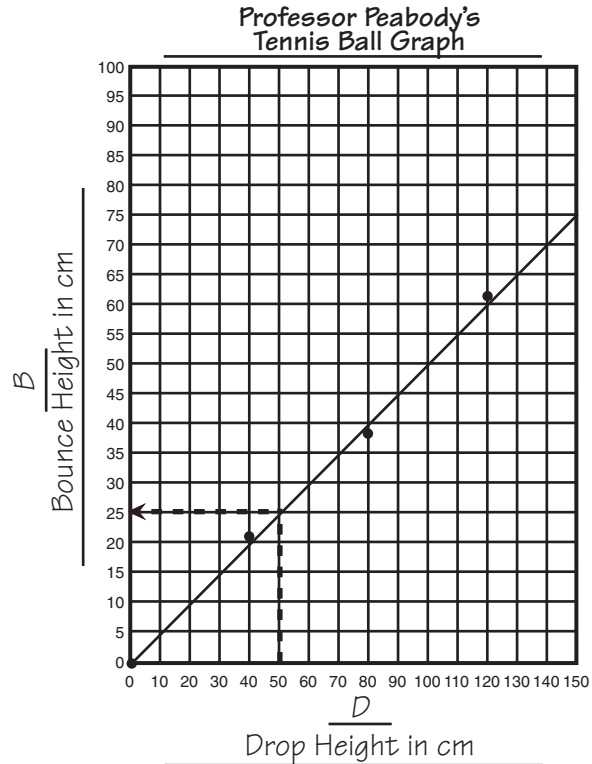* Professor Peabody collected the following data for a tennis ball in a Bouncing Ball Experiment. He did three trials and found the mean. Then he graphed his data.

Professor Peabody's Tennis Ball

D Drop Height (in cm)	B Bounce Height (in cm)			
	Trial 1	Trial 2	Trial 3	Mean
40	21	20	22	21
80	39	38	40	39
120	61	65	60	62

Professor Peabody's Tennis Ball Graph

Bounce Height in cm (vertical axis)
Drop Height in cm (horizontal axis)

A. Complete the function table using Professor Peabody's Drop Heights for input and Bounce Heights for output. Use the graph.

B. Look for a pattern in the data. Describe the pattern in words.

Input	Output
D Drop Height (in cm)	**B** Bounce Height (in cm)
50	
100	
	75
D	

C. Use your pattern to predict the bounce height when the drop height is 200 cm (D = 200 cm).

D. Show the pattern in symbols in the last line of the table.