Student Guide

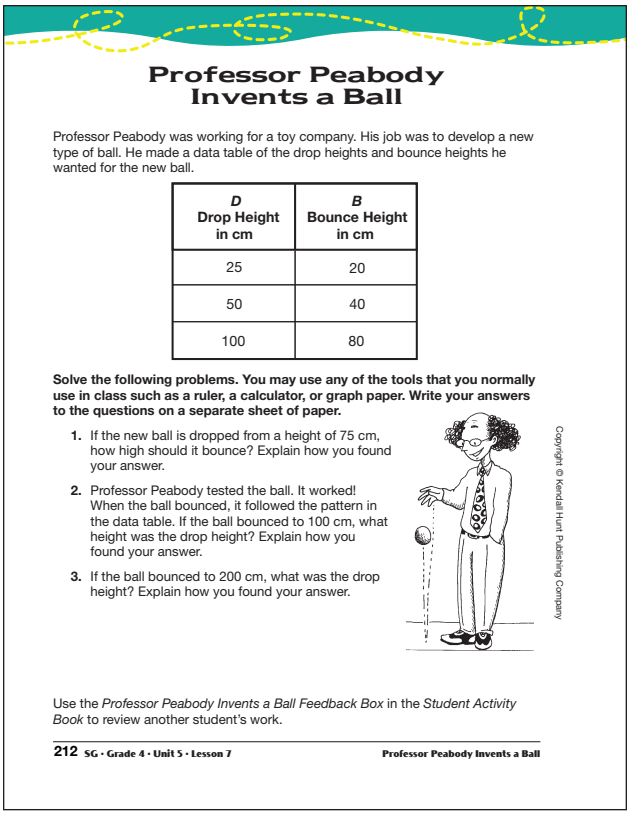
Professor Peabody Invents a Ball (SG p. 212)

Questions 1–3

1.* 60 cm. Solution strategies will vary. See samples of student work in the lesson for possible solutions.

2. 125 cm. Solution strategies will vary. Students might plot a graph for the data and use extrapolation, they might use proportional reasoning, or find patterns in the data table.

3.* 250 cm. Solution strategies will vary. See samples of student work in the lesson for possible solutions.



Professor Peabody Invents a Ball

Professor Peabody was working for a toy company. His job was to develop a new type of ball. He made a data table of the drop heights and bounce heights he wanted for the new ball.

D Drop Height in cm	*B* Bounce Height in cm
25	20
50	40
100	80

Solve the following problems. You may use any of the tools that you normally use in class such as a ruler, a calculator, or graph paper. Write your answers to the questions on a separate sheet of paper.

1. If the new ball is dropped from a height of 75 cm, how high should it bounce? Explain how you found your answer.
2. Professor Peabody tested the ball. It worked! When the ball bounced, it followed the pattern in the data table. If the ball bounced to 100 cm, what height was the drop height? Explain how you found your answer.
3. If the ball bounced to 200 cm, what was the drop height? Explain how you found your answer.

Use the *Professor Peabody Invents a Ball Feedback Box* in the *Student Activity Book* to review another student's work.

***Student Guide*- Page 212**

***Answers and/or discussion are included in the lesson.**