



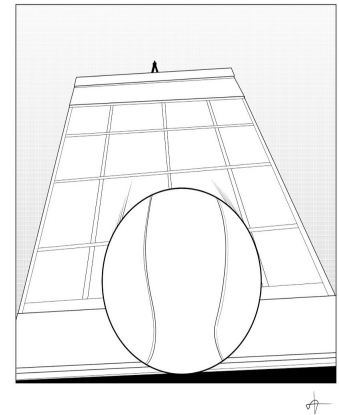
Problem of the Week

Problem B

Boing! Boing! Boing!

A Superball is a special kind of ball that will always bounce to half of the height from which it fell. Supposing that it is dropped from a building that is 128 m tall, answer the following questions.

- (a) How high will it bounce after it hits the ground for the third time?
- (b) How many times must the ball hit the ground so that the next bounce has a height of 2 m?
- (c) How many times must the ball hit the ground so that the next bounce has a height of 25 cm?
- (d) How tall would a building have to be if, after hitting the ground ten times, the ball bounces to 1 m? Is there a building this tall?



EXTENSION: Test different balls to see how high they bounce when dropped from 1 m.