

**STUDENT VERSION**  
**HOW DEEP IS THE WELL?**

Brian Winkel, Director  
SIMIODE  
Cornwall NY USA

**STATEMENT**

1. You drop a pebble into a well. Ten seconds later, you hear the sound of the pebble hitting the water. How deep is the well? For what part of the 10 seconds was the pebble falling? How long did it take the sound to travel back up the well? What assumptions did you make in solving the problem?
2. Suppose another well is just that depth at which the time it takes your pebble to hit the water is the same as the time it takes the sound of it hitting the water to return to the top. How deep is this well?
3. Suppose another well is just that depth at which the time it takes your pebble to hit bottom is 15 times greater than the time it takes the sound of it hitting to return to the top. How deep is this well?