Part (c): Now describe in English how the translate method of the PigLatin class should work (using the rules for translating from English to Pig-Latin given above, and making use of the firstVowelPos method). Then write the actual code. Also write a TestPigLatin class with a main method that asks the user of the program to type in a word, reads the word, and prints the translation. Compile your code and run it!

Exercise 4: Time is of the Essence! (Logical Thinking)

1. You’ve been lost in the African savanna for days and you’re starving. As luck would have it, you stumble upon a shack containing a fresh ostrich egg and a warning: Boil this egg for exactly 9 minutes!

Fortunately there is a pot, water, salt, and a wood stove with supplies to start a fire, but you don’t have a timer, only two hourglasses. One measures four minutes and the other measures seven minutes.

Problem: How can you cook the egg for exactly 9 minutes using only these two hourglasses?

2. You have two pieces of rope. You know that each one takes exactly one hour to burn. They are not necessarily of the same length or width as each other. They also are not of uniform width (for example, they may be wider in the middle than at the ends). Thus, burning half of the length of the rope does not necessarily take half an hour.

Problem: By burning the ropes, how can you measure exactly 45 minutes worth of time?