

Practice with while loops

1. The `int` `countdown` for NASA's rocket launcher is currently at 10 seconds. When the countdown reaches 0, the rocket will launch. Write a while loop that counts down to the time of the launch.

2. In Futurama, the countdown on the electric chair operates a bit strangely. It's set so that when the `int` `display` shows 0, the chair executes its occupant. However, instead of counting from 10 down to 0 like the rocket launcher, the display shows a random integer between 0 and 100 (inclusive) at every second. Write a while loop that prints the display, stopping only when the display shows 0. (The command `Math.random()` produces a random double between 0 and 1 (including 0 but not including 1). You will need to translate this to a random integer between 0 and 100.)

3. Suppose we want to compute x^y for some non-negative ints x and y . Write a program that reads the values of x and y as keyboard input, and then computes x^y using a while loop.