

## 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).)

3. Suppose we want to compute  $x^y$  for some 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.

## More practice with while loops

4. Write a while loop (or loops) that prints a multiplication table for the numbers 1 through 10. Your table should look something like:

```
1  2  3  4  5  6  7  8  9  10
2  4  6  8  10 12 14 16 18 20
3  6  9  12 15 18 21 24 27 30
4  8  12 16 20 24 28 32 36 40
5  10 15 20 25 30 35 40 45 50
6  12 18 24 30 36 42 48 54 60
7  14 21 28 35 42 49 56 63 70
8  16 24 32 40 48 56 64 72 80
9  18 27 36 45 54 63 72 81 90
10 20 30 40 50 60 70 80 90 100
```