

Powers of 2

File **PowersOf2.java** contains the skeleton of a program to read in an integer from the user and display powers of 2.

Complete the program so that it displays the powers of 2 up to the power that the user requests. Do **not** use `Math.pow` to compute the powers of 2. Instead, compute each power from the previous one using a loop. For example, if the user enters **4**, your program should display the following:

```
2 to the power 0 = 1
2 to the power 1 = 2
2 to the power 2 = 4
2 to the power 3 = 8
2 to the power 4 = 16
```