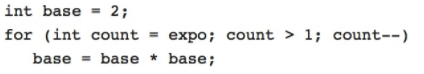
Exercise 4.6 - 8.5 Problem Set

Aviel Resnick

Describe in English what the following code segments do:

1.

1. 
   1. The code above is a for loop, which prints out 2 to the nth power, where n starts at 1, and increments until the integer limit.
2. 
   1. In the loop above, an integer count is set to the value of expo - 1, and base is squared, until the value of count, which decreases by one each time, is < or = to 1. Also, the value of expo needs to be greater than one in order to run.

2.

1. for (int i = 1; i < 11; i++) {

System.out.println(“Square: ” + i \* i + “Cube: ” + i\*i\*i)

{

b. for (int i = 10; i > 0; i--) {  
 System.out.print(i);  
 }

3. Translate the following for loops to equivalent while loops:

Scanner reader new Scanner(System.in);

// For Loop

for (int i = 1; i <= 5; i++) {  
 System.out.print("Enter an integer: ");  
 int number = reader.nextInt();  
 System.out.println(Math.pow(number, 2));  
}

int i = 1;

// While Loop

while (i <= 5) {

System.out.print("Enter an integer: ");

int number = reader.nextInt();

System.out.println(Math.pow(number, 2));

i++;

}

// For Loop

int base = 2;

for (int count = expo; count > 1; count--)

base = base \* base;

// While Loop

int base = 2;

while (expo > 1) {

base = base \* base;

expo--;

}