

What does this code do?

```
private static final int M = 100;
public static void main(String[] args) {
    boolean hd = false; int t = 0;
    for (int n = 3; n <= M; n++) {
        if (0 == n % 2) continue;
        hd = false;
        for (int d = 3;
            d <= Math.ceil(Math.sqrt(n));
            ++d) {
            if (n % d == 0) {
                hd = true;
                break;
            }
        }
        if (!hd) t++;
    }
    System.out.println(t);
}
```

The output:

Fill in the blanks

```
// get initial input
Scanner inputScanner = new Scanner(System.in);
System.out.print("Enter a positive number (0 to quit): ");
int userNumber = inputScanner.nextInt();

// loop until user quits
while ( [redacted] != 0) {
    int numberFactorial = 1;

    // handle negative numbers
    if (userNumber [redacted] 0) {
        System.out.print("Number must be positive. "
            + "Try again: ");
        userNumber = inputScanner.nextInt();

        [redacted];
    }

    // calculate the factorial
    for (int counter = 2;
        counter <= [redacted];
        counter++) {
        numberFactorial [redacted] counter;
    }

    // print results and get the next input
    System.out.println("The factorial of " + userNumber
        + " is: " + numberFactorial);
    System.out.print("Enter a positive number (0 to quit): ");
    userNumber = inputScanner.nextInt();
}

// quit by user
System.out.println("Goodbye.");
```