

```

1  /**
2   * Returns the integer average of two given {@code int}s.
3   *
4   * @param j
5   *         the first of two integers to average
6   * @param k
7   *         the second of two integers to average
8   * @return the integer average of j and k
9   * @ensures average = (j+k)/2
10  */
11  public static int average(int j, int k) {
12      int avg;
13      if(j + k > Integer.MAX_VALUE){
14          int balance = j + k - Integer.MAX_VALUE;
15          int newTotal = Integer.MIN_VALUE + balance;
16          avg = newTotal / 2;
17      }
18      if(j - k){
19          int balance = j + k + Integer.MIN.VALUE;
20          int newTotal = Integer.MAX_VALUE - balance;
21          avg = newTotal / 2;
22      }
23      return avg;
24  }
25
26

```