

```

/**
 * Computes the remainder of the
 * Euclidean division of a by b. In
 * contrast to the Java version a % b,
 * the output will always be positive.
 * Throws ArithmeticException when b is
 * equal to 0.
 *
 * (The goal of this example is not to
 * create an efficient implementation,
 * but to illustrate coverage.)
 *
 * @param a dividend
 * @param b divisor != 0
 * @return remainder r with  $0 \leq r < b$ 
 */
public static int modulo(int a, int b) {
    if (b < 0) { // 1
        b *= -1; // 2
    }
    int m = a; // 3
    while (m < 0 || m > b) { // 4
        m += m < 0 ? b : -b; // 5
    }
    return m; // 6
}

```