

$h \rightarrow 7 (1, 7)$
 $11 (1, 11)$
 $13 (1, 13)$
 $17 (1, 17)$
 $19 (1, 19)$
 $23 (1, 23)$
 $29 (1, 29)$
 $31 (1, 31)$
 \vdots

$(2, n-1)$

$\text{for (int } i = 2; i \leq h-1; i++) \{$
 $\quad \text{if } (h - i) == 0 \{$

3

```

public static void main(String[] args) {
    int n = scn.nextInt();
    boolean flag = true; // i'm assuming i'm a prime number.
    for(int i = 2; i < n; i++){
        if(n % i == 0){
            flag = false;
            break;
        }
    }

    if(flag){
        System.out.println(n + " is a prime number");
    }else{
        System.out.println(n + " is a not prime number");
    }
}

```

$$8 = 8/2 = 4$$



number = N

$$35 / 17.5$$

$$N / (N/2)$$

$$26 / 18$$

$$35 / 18 = 1.944\ldots$$

$$1/19 = 0.0526\ldots$$

$$120 = 1.2$$

$h = (8, 35, 63, 101, 7, 15, 29, 135, 503, 1999)$

$$\text{loop} = (2, h/2) = ?$$

```

public static void main(String[] args) {
    int n = scn.nextInt();
    boolean flag = true; // i'm assuming i'm a prime number.
    for (int i = 2; i * i <= n; i++) {
        if (n % i == 0) {
            flag = false;
            break;
        }
    }

    if (flag) {
        System.out.println(n + " is a prime number");
    } else {
        System.out.println(n + " is a not prime number");
    }
}

```

26 =

$$\text{even number} = (\text{half number})$$

$$\text{even number} \leq (\text{half number})$$

odd number

17 18

$$[h/2 + 1, h - 1]$$

$$[h/2 + 1, h] = \text{only } h$$

$$27: [17, 35]$$

$$49: [24, 48]$$

$$81: [25, 80]$$

$$(2, h/2)$$