

1. 计算下列代码片段的 *Halstead* 复杂度的11项内容：

```
if (month < 3) {
    month += 12;
    -year;
}
return dayray((int)(day + (month + 1) * 26/10 + year +
    year/4 + 6 * (year/100) + year/400)% 7);
```

解答：

Operator	Number of Occurrences	Operand	Number of Occurrences
if	1	month	3
<	1	year	5
+=	1	day	1
-	1	3	1
return	1	12	1
+	6	1	1
*	2	26	1
/	4	10	1
%	1	4	1
dayray	1	6	1
int	1	100	1
		400	1
		7	1
n1 = 11	N1 = 20	n2 = 13	N2 = 19

1. 程序词汇表长度 Program vocabulary: $n = n1 + n2 = 24$

2. 程序长度或简单长度 Program length: $N = N1 + N2 = 39$

3. 程序的预测长度 Calculated program length: $N^{\wedge} = 11 \log_2 11 + 13 \log_2 13 = 86.16$

4. 程序体积或容量 Volume: $V = N \log_2 n = 39 \log_2 24 = 178.8$

5. 程序级别 Level: $L^{\wedge} = (2 / n1) * (n2 / N2) = 2/11 * 13/19 = \frac{26}{209} = 0.124$

6. 程序难度 Difficulty: $D = 1 / (L^{\wedge}) = \frac{209}{26} = 8.04$

7. 编程工作量 Effort: $E = V * D = (\frac{8151}{26}) \log_2 24 = 1437.39$

8. 语言级别: $L' = L^{\wedge} * L^{\wedge} * V = (\frac{26}{209})^2 * 39 \log_2 24 = 2.78$

9. 编程时间 (hours): $T^{\wedge} = E / (S * f) = \frac{1}{60*60*18} * (\frac{8151}{26}) \log_2 24 = 0.022$

10. 平均语句大小: $N/\text{语句数} = \frac{39}{4} = 9.75$

11. 程序中的错误数预测值: $B = V/3000 = (\frac{39}{3000}) \log_2 24 = 0.06$