

1. 如果 $a=2.7, b=6.1, c=5.5, d=6, l=.false., m=.true.$, 求下列逻辑表达式的值。

(1) $(a-b).lt.(b-c).and.a.eq.2.7$

(2) $a+2 * b.ne.b+c.or.c.ne.d$

(3) $.not.l.and.m$

(4) $a \geq b.or.c \leq d.and.l == .not.m$

(5) $c/2+d < a.and..not..true..or.c==d$

2. 阅读下列程序,给出运行结果。

(1) READ *, N

X = 1.0

IF(N >= 0) X = 2 * X

IF(N >= 5) X = 2 * X + 1.0

IF(N > 15) X = 3 * X - 1.0

PRINT *, X

END

如果从键盘输入 15,输出程序运行结果。

(2) READ *, A

IF(A .GE. 3.5) THEN

Y = 3.0

ELSE

IF(A .GE. 4.5) THEN

Y = 4.5

ELSE

Y = 4.0

ENDIF

ENDIF

PRINT *, Y

END

如果从键盘输入 5.0,输出程序运行结果。

(3) LOGICAL P, Q

READ *, X, Y

P = (X .GE. 0.0) .AND. (Y .GE. 0.0)

Q = X + Y > 7.5 .AND. (Y >= 0.0)

P = .FALSE.

IF(.NOT. P .AND. Q) THEN

Z = 0.0

ELSE IF(.NOT. Q) THEN

Z = 0.0

ELSE IF(P) THEN

Z = 2.0

ELSE

Z = 3.0

ENDIF

PRINT *, Z

END

如果从键盘输入 3.5,4.5,输出程序运行结果。

(4) CHARACTER A, C

READ *, A

SELECT CASE(A)

CASE('a':'z')

C = CHAR(ICHAR(A) - 32)

CASE('A':'Z')

C = CHAR(ICHAR(A) + 32)

CASE DEFAULT

C = A

END SELECT

PRINT *, A, C

END

如果从键盘输入 E,输出程序运行结果。

3. 写出下列程序的运行结果。

(1) $S = 1.0$

```
DO K = 2, 10, 4
```

```
    S = S + 1/K
```

```
ENDDO
```

```
PRINT *, S
```

```
END
```

(2) $S = 1.0$

```
DO K = 3, 1, -1
```

```
    DO N = -1, -3
```

```
        S = 2 * S
```

```
    ENDDO
```

```
ENDDO
```

```
PRINT *, S
```

```
END
```

(3) DO N = 10, 99

```
    NA = N/10
```

```
    NB = MOD(N, 10)
```

```
    IF (NA + NB .EQ. 10) THEN
```

```
        PRINT *, 'N = ', N
```

```
    ENDIF
```

```
ENDDO
```

```
END
```

(4) M = 0

```
DO I = 1, 4
```

```
    J = I
```

```
    DO K = 1, 3
```

```
        L = K
```

```
        M = M + 1
```

```
    ENDDO
```

```
ENDDO
```

```
PRINT *, I, J, K, L, M
```

```
END
```