

【前回の最大最小をもとめるプログラムを解説】

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PROGRAM DAISHO
INTEGER M, SAIDAI, SAISHO
READ(*,*)M
SAIDAI=M
SAISHO=M
5 READ(*,*,END=20)M          ← Ctrl-D まで入力続く
IF(M.GT.SAIDAI)SAIDAI=M      ← IF 文省略形
IF(M.LT.SAISHO)SAISHO=M      ← IF 文省略形
GOTO 5

```

〔以下省略〕

【1次元配列を使う】

- (1) Info の下に 030618 というディレクトリを作る。
 (2) 始めに入力した個数の実数を配列に入力して、表示するプログラム hairersu1 を作成しなさい。

```

PROGRAM HAIRETSU1
INTEGER I, NUM
[ REAL A(100) ] ← 配列宣言
WRITE(*,*)'INPUT NUMBER: '
READ(*,*)NUM
[ DO 10 I=1,10 ] ← DO 文
READ(*,*)A(I)
10 CONTINUE
DO 20 I=1,NUM
WRITE(*,601)A(I)
601 FORMAT('A(',I3,')=',F7.3)
20 CONTINUE
STOP
END

```

- (3) 合計および平均を計算するようにプログラムを修正しなさい。
 (4) 下記標準偏差 σ を計算するようにプログラムを修正しなさい。

$$\text{平均を } \bar{x} \text{ とすると標準偏差 } \hat{\sigma} \text{ は } \sigma = \sqrt{\frac{1}{n} \sum_{i=1}^n (x_i - \bar{x})^2}$$

- (5) Advance 下記の表現を使って 5 個の数字を一行に記述するように改良する。

```
WRITE(*,601)(A(I),I=1,5)
```

(基本的には、上記の文を入力数字の個数の 1/5 回だけ DO ループで繰り返す。最後の 5 個の数字で、入力していない余計な数字を出力してしまわないようにするための工夫が必要)

正 規 分 布 表

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$$u_0 \mapsto P(0 \leq U \leq u_0)$$

- | u_0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0.0 | .0000 | .0040 | .0080 | .0120 | .0160 | .0199 | .0239 | .0279 | .0319 | .0359 |
| 0.1 | .0398 | .0438 | .0478 | .0517 | .0557 | .0596 | .0636 | .0675 | .0714 | .0753 |
| 0.2 | .0793 | .0832 | .0871 | .0910 | .0948 | .0987 | .1026 | .1064 | .1103 | .1141 |
| 0.3 | .1179 | .1217 | .1255 | .1293 | .1331 | .1368 | .1406 | .1443 | .1480 | .1517 |
| 0.4 | .1554 | .1591 | .1628 | .1664 | .1700 | .1736 | .1772 | .1808 | .1844 | .1879 |
| 0.5 | .1915 | .1950 | .1985 | .2019 | .2054 | .2088 | .2123 | .2157 | .2190 | .2224 |
| 0.6 | .2257 | .2291 | .2324 | .2357 | .2389 | .2422 | .2454 | .2486 | .2517 | .2549 |
| 0.7 | .2580 | .2611 | .2642 | .2673 | .2704 | .2734 | .2764 | .2794 | .2823 | .2852 |
| 0.8 | .2881 | .2910 | .2939 | .2967 | .2995 | .3023 | .3051 | .3078 | .3106 | .3133 |
| 0.9 | .3159 | .3186 | .3212 | .3238 | .3264 | .3289 | .3315 | .3340 | .3365 | .3389 |
| 1.0 | .3413 | .3438 | .3461 | .3485 | .3508 | .3531 | .3554 | .3577 | .3599 | .3621 |
| 1.1 | .3643 | .3665 | .3686 | .3708 | .3729 | .3749 | .3770 | .3790 | .3810 | .3830 |
| 1.2 | .3849 | .3869 | .3888 | .3907 | .3925 | .3944 | .3962 | .3980 | .3997 | .4015 |
| 1.3 | .4032 | .4049 | .4066 | .4082 | .4099 | .4115 | .4131 | .4147 | .4162 | .4177 |
| 1.4 | .4192 | .4207 | .4222 | .4236 | .4251 | .4265 | .4279 | .4292 | .4306 | .4319 |
| 1.5 | .4332 | .4345 | .4357 | .4370 | .4382 | .4394 | .4406 | .4418 | .4429 | .4441 |
| 1.6 | .4452 | .4463 | .4474 | .4484 | .4495 | .4505 | .4515 | .4525 | .4535 | .4545 |
| 1.7 | .4554 | .4564 | .4573 | .4582 | .4591 | .4599 | .4608 | .4616 | .4625 | .4633 |
| 1.8 | .4641 | .4649 | .4656 | .4664 | .4671 | .4678 | .4686 | .4693 | .4699 | .4706 |
| 1.9 | .4713 | .4719 | .4726 | .4732 | .4738 | .4744 | .4750 | .4756 | .4761 | .4767 |
| 2.0 | .4772 | .4778 | .4783 | .4788 | .4793 | .4798 | .4803 | .4808 | .4812 | .4817 |
| 2.1 | .4821 | .4826 | .4830 | .4834 | .4838 | .4842 | .4846 | .4850 | .4854 | .4857 |
| 2.2 | .4861 | .4864 | .4868 | .4871 | .4875 | .4878 | .4881 | .4884 | .4887 | .4890 |
| 2.3 | .4893 | .4896 | .4898 | .4901 | .4904 | .4906 | .4909 | .4911 | .4913 | .4916 |
| 2.4 | .4918 | .4920 | .4922 | .4925 | .4927 | .4929 | .4931 | .4932 | .4934 | .4936 |
| 2.5 | .49379 | .49396 | .49413 | .49430 | .49446 | .49461 | .49477 | .49492 | .49506 | .49520 |
| 2.6 | .49534 | .49547 | .49560 | .49573 | .49585 | .49598 | .49609 | .49621 | .49632 | .49643 |
| 2.7 | .49653 | .49664 | .49674 | .49683 | .49693 | .49702 | .49711 | .49720 | .49728 | .49736 |
| 2.8 | .49744 | .49752 | .49760 | .49767 | .49774 | .49781 | .49788 | .49795 | .49801 | .49807 |
| 2.9 | .49813 | .49819 | .49825 | .49831 | .49836 | .49841 | .49846 | .49851 | .49856 | .49861 |
| 3.0 | .49865 | .49869 | .49874 | .49878 | .49882 | .49886 | .49889 | .49893 | .49897 | .49900 |
| 3.1 | .49903 | .49906 | .49910 | .49913 | .49916 | .49918 | .49921 | .49924 | .49926 | .49929 |
| 3.2 | .49931 | .49934 | .49936 | .49938 | .49940 | .49942 | .49944 | .49946 | .49948 | .49950 |
| 3.3 | .49952 | .49953 | .49955 | .49957 | .49958 | .49960 | .49961 | .49962 | .49964 | .49965 |
| 3.4 | .49966 | .49968 | .49969 | .49970 | .49971 | .49972 | .49973 | .49974 | .49975 | .49976 |
| 3.5 | .49977 | .49978 | .49978 | .49979 | .49980 | .49981 | .49981 | .49982 | .49983 | .49983 |
| 3.6 | .49984 | .49985 | .49985 | .49986 | .49986 | .49987 | .49987 | .49988 | .49988 | .49989 |
| 3.7 | .49989 | .49990 | .49990 | .49991 | .49991 | .49991 | .49992 | .49992 | .49992 | .49992 |
| 3.8 | . | | | | | | | | | |

(おまけ)