**SAS001 t TEST**

**Question**: Is it true that on average the rate of inflation 1980-92 was higher than the average rate of inflation 1970-80?

Explain how you arrived at your answer (how do you know from your output that this is the answer)?

data exchangerate;

input

country $ a2 -a11;

label a2= Population

a3= Area

a4= GNP per capita 1992

a5= avg annual growth of real GNP per capita 1980-92

a6= rate of inflation 1970-80

a7= rate of inflation 1980-92

a8= Life expectancy 1992,

a9= adult illiteracy female 1990

a10= adult illiteracy - Total 1990

a11= Continent code ;

diff = a6 -a7;

cards;

Mozambiq 16.5 802 60 -3.6 x 38 44 79 67 1

Ethiopia 54.8 1222 110 -1.9 4.3 2.8 49 x x 1

Tanzania 25.9 945 110 x 14.1 25.3 51 x x 1

Sierra 4.4 72 160 -1.4 12.5 60.8 43 89 79 1

Nepal 19.9 141 170 2 8.5 9.2 54 87 74 2

Uganda 17.5 236 170 x x x 43 65 52 1

Bhutan 1.5 47 180 x x 8.7 48 75 62 2

Burundi 5.8 28 210 1.3 10.7 4.5 48 60 50 1

Malawi 9.1 118 210 -0.1 8.8 15.1 44 x x 1

Banglade 114.4 144 220 1.8 20.8 9.1 55 78 65 2

Chad 6 1284 220 3.4 7.7 0.9 47 82 70 1

Guinea 1 36 220 1.6 5.7 59.3 39 76 64 1

Madagasc 12.4 587 230 -2.4 9.9 16.4 51 27 20 1

Rwanda 7.3 26 250 -0.6 15.1 3.6 46 63 50 1

Niger 8.2 1267 280 -4.3 10.9 1.7 46 83 72 1

BurkinaF 9.5 274 300 1 8.6 3.5 48 91 82 1

India 883.6 3288 310 3.1 8.4 8.5 61 66 52 2

Kenya 25.7 580 310 0.2 10.1 9.3 59 42 31 1

Mali 9 1240 310 -2.7 9.7 3.7 48 76 68 1

Nigeria 101.9 924 320 -0.4 15.2 19.4 52 61 49 1

Nicaragu 3.9 130 340 -5.3 12.8 656.2 67 x x 3

Togo 3.9 57 390 -1.8 8.9 4.2 55 69 57 1

Benin 5 113 410 -0.7 10.3 1.7 51 84 77 1

CentralA 3.2 623 410 -1.5 12.1 4.6 47 75 62 1

Pakistan 119.3 796 420 3.1 13.4 7.1 59 79 65 2

Ghana 15.8 239 450 -0.1 35.2 38.7 56 79 65 1

China 1162.2 9561 471 x x 6.5 69 38 27 2

Maurinta 2.1 1026 530 -0.8 9.9 8.3 48 79 66 1

SriLanka 17.4 66 540 1 2.3 11 72 17 12 2

Zimbabwe 10.4 391 570 -0.9 9.4 14.4 60 40 33 1

Honduras 5.4 112 580 -0.3 8.1 7.6 66 29 27 3

Lesotho 1.9 30 590 -0.5 9.7 13.2 60 x x 1

Egypt 54.7 1001 640 1.8 9.6 13.2 62 66 52 1

Indonesi 184.3 1905 670 4 21.5 8.4 60 32 23 2

Myanmar 43.7 677 x x 11.4 14.8 60 28 19 2

;

proc means n mean t prt; var a6 a7 diff;

run;

OUTPUT:

|  |
| --- |
| The SAS System |

The MEANS Procedure

| **Variable** | **Label** | **N** | **Mean** | **t Value** | **Pr > |t|** |
| --- | --- | --- | --- | --- | --- |
| |  | | --- | | **a6** | | **a7** | | **diff** | | |  | | --- | | **rate of inflation 1970-80** | | **rate of inflation 1980-92** | |  | | |  | | --- | | 31 | | 34 | | 31 | | |  | | --- | | 11.4709677 | | 32.6382353 | | -22.6096774 | | |  | | --- | | 10.80 | | 1.71 | | -1.08 | | |  | | --- | | <.0001 | | 0.0963 | | 0.2870 | |

**ANSWER**: THERE IS NO STATISTICALLY SIGNIFICANT DIFFERENCE BETWEEN THE TWO RATES OF INFLATION.

SINCE THE PROBABILITY VALUE OF THE DIFFERENCE BETWEEN THESE TWO MEANS = 0.2870, WHICH

IS GREATER THAN 0.05.