

{TESTE DA CORRIDA (RUN TEST)}

uses crt; {Se estiver usando o Turbo Pascal para Windows, usar uses wincrt;}

Type

Vetor1 = Array[1..150] of Longint;

Vetor2 = Array[0..150] of Real;

Var

semente: double; {Variavel utilizada pela RAND2}

N, I, J, X, Alfa, SVobs, GVobs: Longint;

U, U1: Double;

D, Maior, Cat, Mais, Menos, gl : Integer;

SVesp, Quic, QuicT, SQuic, GVesp, Param, P : Real;

Cor : Vetor1;

Vesp, A : Vetor2;

{$I RAND2.PAS}

Function Fatorial(Number : Double): Double;

VAR

valor : Double;

Kounter : longint;

BEGIN

valor := 1;

FOR Kounter := Trunc(Number) DOWNTO 1 DO

valor := Valor \* Kounter;

Fatorial := valor;

END;

{\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*}

Begin

Writeln('Quantos Numeros ?');

Readln(N);

Mais := 0;

Menos := 0;

Writeln('Qual a semente ? (1 - 2147483646) ');

Readln(semente);

Writeln('Escolha nivel de significancia (alfa) --> 1, 5 ou 10 %');

Readln(Alfa);

If Alfa = 5 then

Begin

Param := 1.6449;

end

else

Begin

If Alfa = 1 then

Begin

Param := 2.3263;

end

else

Begin

If Alfa = 10 then

Begin

Param := 1.2816;

end

else

Begin

Writeln('Nivel de significancia ERRADO !');

Exit;

end

end

end;

Clrscr;

U := Rand2;

U1 := Rand2;

If U1 < U then Menos := 1

Else Mais := 1;

For I := 1 to 150 do

Begin

Cor[I] := 0;

end;

For I:= 3 to N do

Begin

U := Rand2;

If (U > U1) and (Mais <> 0) then Mais := Mais + 1;

If (U <= U1) and (Menos <> 0) then Menos := Menos +1;

If (U > U1) and (Mais = 0) then

Begin

Cor[Menos] := Cor[Menos] + 1;

Menos := 0;

Mais := 1;

end;

If (U <= U1) and (Menos = 0) then

Begin

Cor[Mais] := Cor[Mais] + 1;

Menos := 1;

Mais := 0;

end;

U1 := U;

End;

If Mais <> 0 then Cor[Mais] := Cor[Mais] + 1;

If Menos <> 0 then Cor[Menos] := Cor[Menos] + 1;

For I := 1 to 150 do

Begin

P := I;

Vesp[I] := ((P \* P) + 3 \* P + 1) \* N;

Vesp[I] := 2 \* (Vesp[I] - ((P \* P \* P) + 3.0 \* (P \* P) - P - 4));

Vesp[I] := Vesp[I] / Fatorial(P + 3.0);

If Vesp[I] < 0.001 Then Vesp[I] := 0.0;

end;

Cat := 150;

While (Vesp[Cat] = 0.0) do

Begin

Cat := Cat - 1;

End;

SVesp := 0.0;

SVobs := 0;

Quic := 0.0;

gl := 0;

For I := 1 to Cat do

Begin

SVesp := SVesp + Vesp[I];

SVobs := SVobs + Cor[I];

if SVesp > 5.0 then

Begin

gl := gl + 1;

SQuic := SQR(SVobs - SVesp);

SQuic := SQuic / SVesp;

GVesp := SVesp;

GVobs := SVobs;

Quic := Quic + SQuic;

SVobs := 0;

SVesp := 0.0;

End;

End;

If SVesp <> 0 then

Begin

Quic := Quic - Squic;

SVesp := SVesp + GVesp;

SVobs := SVobs + GVobs;

SQuic := (SQR(SVobs - SVesp) / SVesp);

Quic := Quic + SQuic;

End;

gl := gl - 1;

QuicT := 1.-(2./(9.\*gl))+(Param\*SQRT(2./(9.\*gl)));

QuicT := QuicT \* QuicT \* QuicT;

QuicT := gl \* QuicT + 0.005;

Writeln('---------------------------------------');

Writeln('Quantidade de Numeros = ',N);

Writeln('Alfa = ',Alfa,'%');

Writeln('Graus de Liberdade = ',gl);

Writeln('QuiQuadrado Calc = ', Quic:8:2);

Writeln('QuiQuadrado Tab Aprox = ', QuicT:8:2);

Writeln('---------------------------------------');

End.