with(plots):
f := n -> (1/n);

Procedure below rearranges alternating series:
sum((-1)^(n+1)*f(n),n);

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sum((-1)^(n+1)*f(n),n);

(a) 
(b)
with(plots):

> rearrange := proc(L,N)
local b,oddn,evenn,sum,i;
b := Array([seq(0,i=1..N)]);
oddn := 1;
evenn := 2;
sum := 0;
for i from 1 to N do
if sum <= L then
b[i] := evalf(f(oddn));
oddn := oddn + 2;
else
b[i] := -evalf(f(evenn));
evenn := evenn + 2;
end if;
sum := sum + b[i];
end do;
b;
end proc:

Set goal and number of points:
goal := evalf(Pi);
numpts := 2000;
newseries := rearrange(goal,numpts):

Create and plot sequence of partial sums for rearranged series:
partsums := Array([seq(0,i=1..numpts)]):
partsums[1] := evalf(newseries[1]);
for i from 2 to numpts do
partsums[i] := evalf(partsums[i-1]+newseries[i]);
end do:
sumplot := listplot(partsums):
goalplot := plot(goal,x=1..numpts,y=goal-1..goal+1):
display({sumplot,goalplot});