

Advent Of Code

--- Day 7: Amplification Circuit ---

Part 1

```
clear; clc;
inp=[3,8,1001,8,10,8,105,1,0,0,21,46,67,76,97,118,199,280,361,442,99999,3,9,1002,9,3,9,101,4,9,
pm=perms(0:1:4); op=[]; con=1;
for i=1:1:length(pm)
    temp=inp; temp1=inp; temp2=inp; temp3=inp; temp4=inp;
    A1=intcode(temp,pm(i,1),0);
    A2=intcode(temp1,pm(i,2),A1);
    A3=intcode(temp2,pm(i,3),A2);
    A4=intcode(temp3,pm(i,4),A3);
    A5=intcode(temp4,pm(i,5),A4);
    op(1,con)=A5;
    con=con+1;
end
disp(max(op))
```

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Part 2:

```
inp=[3,8,1001,8,10,8,105,1,0,0,21,46,76,97,118,199,280,361,442,999999,3,9,1002,9,3,9,101,4,9,
% inp=[3,26,1001,26,-4,26,3,27,1002,27,2,27,1,27,26,27,4,27,1001,28,-1,28,1005,28,6,99,0,0,5];
pm2=perms(5:1:9); op1=[]; con1=1; optr=[]; C={}; con3=1;
for j=1:1:length(pm2)
    T=inp; A5=0; con2=1;
    [A1,T]=intcode2(T,pm2(j,1),A5);
    [A2,T]=intcode2(T,pm2(j,2),A1);
    [A3,T]=intcode2(T,pm2(j,3),A2);
    [A4,T]=intcode2(T,pm2(j,4),A3);
    [A5,T]=intcode2(T,pm2(j,5),A4);
    x1=A5; opf=0;
    while true
        [T,x1,pb,pd]=thrustm(pm2(j,:),T,x1);

    end
end
```

```
function [T1,x1,pb,pd]=thrustm(x,T,output)
    [A1,T]=intcode2(T,x(1),output);
    [A2,T]=intcode2(T,x(2),A1);
    [A3,T]=intcode2(T,x(3),A2);
    [A4,T]=intcode2(T,x(4),A3);
    [A5,T,pz1,pd1]=intcode2(T,x(5),A4);
    x1=A5; T1=T; pb=pz1; pd=pd1;
end
```