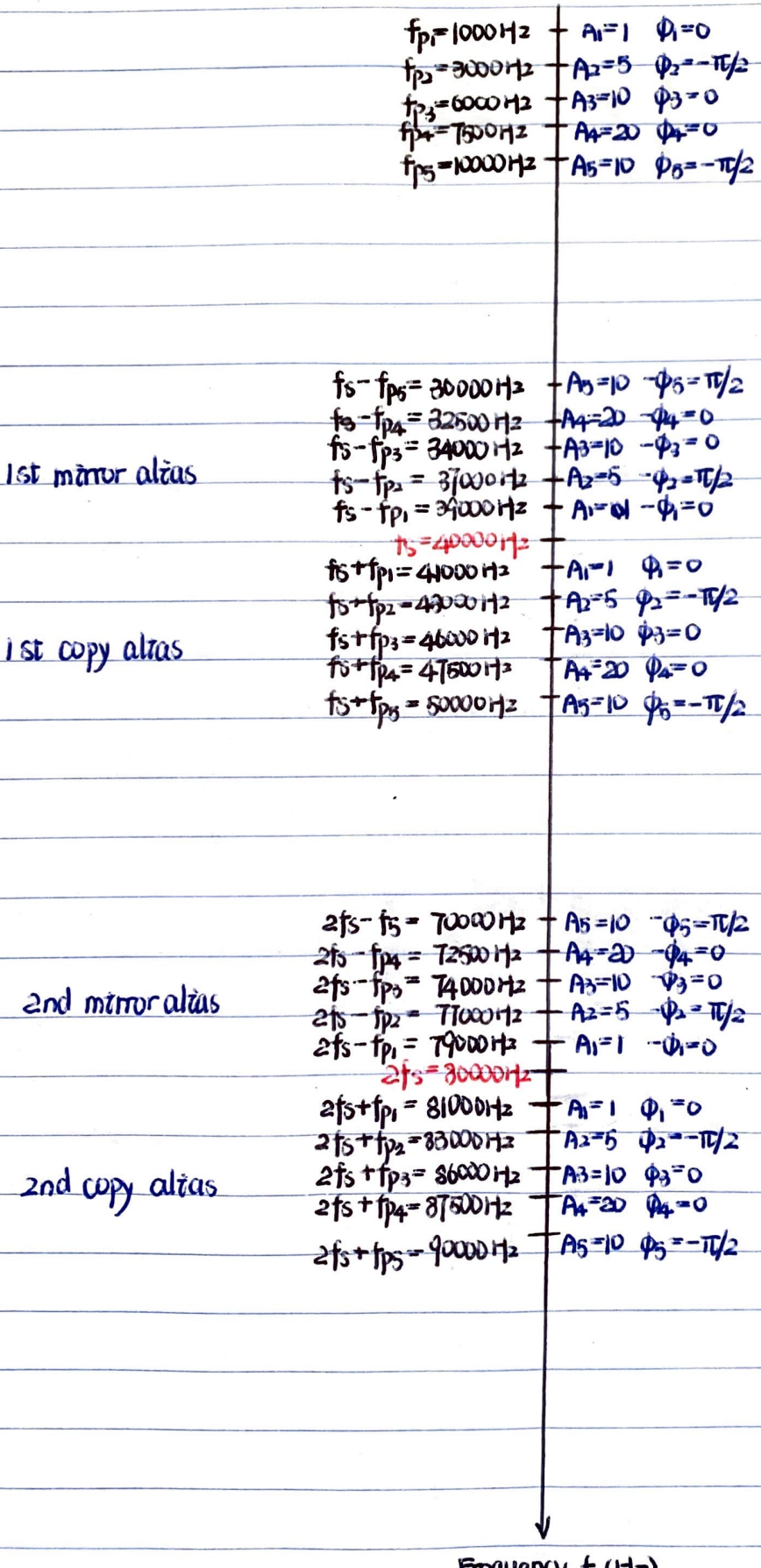
Problem 8


$f_{p_1}=1000Hz$ $A_1=1$ $\phi_1=0$
$f_{p_2}=3000Hz$ $A_2=5$ $\phi_2=-\pi/2$
$f_{p_3}=6000Hz$ $A_3=10$ $\phi_3=0$
$f_{p_4}=7500Hz$ $A_4=20$ $\phi_4=0$
$f_{p_5}=10000Hz$ $A_5=10$ $\phi_5=-\pi/2$
1st mirror alias
$f_s-f_{p_5}=30000Hz$ $A_5=10$ $-\phi_5=\pi/2$
$f_s-f_{p_4}=32500Hz$ $A_4=20$ $-\phi_4=0$
$f_s-f_{p_3}=34000Hz$ $A_3=10$ $-\phi_3=0$
$f_s-f_{p_2}=37000Hz$ $A_2=5$ $-\phi_2=\pi/2$
$f_s-f_{p_1}=39000Hz$ $A_1=1$ $-\phi_1=0$
$f_s=40000Hz$
1st copy alias
$f_s+f_{p_1}=41000Hz$ $A_1=1$ $\phi_1=0$
$f_s+f_{p_2}=43000Hz$ $A_2=5$ $\phi_2=-\pi/2$
$f_s+f_{p_3}=46000Hz$ $A_3=10$ $\phi_3=0$
$f_s+f_{p_4}=47500Hz$ $A_4=20$ $\phi_4=0$
$f_s+f_{p_5}=50000Hz$ $A_5=10$ $\phi_5=-\pi/2$
2nd mirror alias
$2f_s-f_5=70000Hz$ $A_5=10$ $-\phi_5=\pi/2$
$2f_s-f_{p_4}=72500Hz$ $A_4=20$ $-\phi_4=0$
$2f_s-f_{p_3}=74000Hz$ $A_3=10$ $-\phi_3=0$
$2f_s-f_{p_2}=77000Hz$ $A_2=5$ $-\phi_2=\pi/2$
$2f_s-f_{p_1}=79000Hz$ $A_1=1$ $-\phi_1=0$
$2f_s=80000Hz$
2nd copy alias
$2f_s+f_{p_1}=81000Hz$ $A_1=1$ $\phi_1=0$
$2f_s+f_{p_2}=83000Hz$ $A_2=5$ $\phi_2=-\pi/2$
$2f_s+f_{p_3}=86000Hz$ $A_3=10$ $\phi_3=0$
$2f_s+f_{p_4}=87500Hz$ $A_4=20$ $\phi_4=0$
$2f_s+f_{p_5}=90000Hz$ $A_5=10$ $\phi_5=-\pi/2$
Frequency f (Hz)