

1. $\mu(1)=1, \mu(2)=-1, \mu(3)=-1, \mu(4)=0, \mu(5)=-1,$
 $\mu(6)=1, \mu(7)=-1, \mu(8)=0, \mu(9)=0, \mu(10)=1, \mu(11)=-1,$
 $\mu(12)=0, \mu(13)=-1, \mu(14)=1, \mu(15)=1, \mu(16)=0, \mu(17)=-1,$
 $\mu(18)=0, \mu(19)=-1, \mu(20)=0$
 $M(1)=1, M(2)=0, M(3)=-1, M(4)=-1, M(5)=-2, M(6)=-1,$
 $M(7)=-2, M(8)=-2, M(9)=-2, M(10)=-1, M(11)=-2, M(12)=-2,$
 $M(13)=-3, M(14)=-2, M(15)=-1, M(16)=-1, M(17)=-2,$
 $M(18)=-2, M(19)=-3, M(20)=-3$

2. $4=2+2, 6=3+3, 8=5+3, 10=5+5, 12=7+5, 14=7+7,$
 $16=13+3, 18=13+5, 20=17+3, 22=11+11, 24=17+7,$
 $26=13+13, 28=23+5, 30=11+19$

3. $(3,5), (5,7), (11,13), (17,19)$

4. $[2, 1]$
 $[3, 5, 8, 4, 2, 1]$
 $[4, 2, 1]$
 $[5, 8, 4, 2, 1]$
 $[6, 3, 5, 8, 4, 2, 1]$
 $[7, 11, 17, 26, 13, 20, 10, 5, 8, 4, 2, 1]$
 $[8, 4, 2, 1]$
 $[9, 14, 7, 11, 17, 26, 13, 20, 10, 5, 8, 4, 2, 1]$
 $[10, 5, 8, 4, 2, 1]$
 $[11, 17, 26, 13, 20, 10, 5, 8, 4, 2, 1]$
 $[12, 6, 3, 5, 8, 4, 2, 1]$
 $[13, 20, 10, 5, 8, 4, 2, 1]$
 $[14, 7, 11, 17, 26, 13, 20, 10, 5, 8, 4, 2, 1]$
 $[15, 23, 35, 53, 80, 40, 20, 10, 5, 8, 4, 2, 1]$
 $[16, 8, 4, 2, 1]$
 $[17, 26, 13, 40, 20, 10, 5, 8, 4, 2, 1]$

[18, 9, 14, 7, 11, 17, 26, 13, 20, 10, 5, 8, 4, 2, 1]

[19, 29, 44, 22, 11, 17, 26, 13, 20, 10, 5, 8, 4, 2, 1]

[20, 10, 5, 8, 4, 2, 1]