```
In [13]: for m in range(1,4):
    ...:     print('for m =',m)
    ...:     for k in range(1,6):
    ...:         n = m+k
    ...:         inv_lambda = ((1/(m**2))-(1/(n**2)))
    ...:         z = round(inv_lambda,3)
    ...:         print('transition from ',n,'  to ', m, '
gives wave number =', z,'R')
    ...:     print('NEXT')
    ...: print('END')
for m = 1
transition from  2   to  1  gives wave number = 0.75 R
transition from  3   to  1  gives wave number = 0.889 R
transition from  4   to  1  gives wave number = 0.938 R
transition from  5   to  1  gives wave number = 0.96 R
transition from  6   to  1  gives wave number = 0.972 R
NEXT
for m = 2
transition from  3   to  2  gives wave number = 0.139 R
transition from  4   to  2  gives wave number = 0.188 R
transition from  5   to  2  gives wave number = 0.21 R
transition from  6   to  2  gives wave number = 0.222 R
transition from  7   to  2  gives wave number = 0.23 R
NEXT
for m = 3
transition from  4   to  3  gives wave number = 0.049 R
transition from  5   to  3  gives wave number = 0.071 R
transition from  6   to  3  gives wave number = 0.083 R
transition from  7   to  3  gives wave number = 0.091 R
transition from  8   to  3  gives wave number = 0.095 R
NEXT
END

In [14]:
```