15.2:

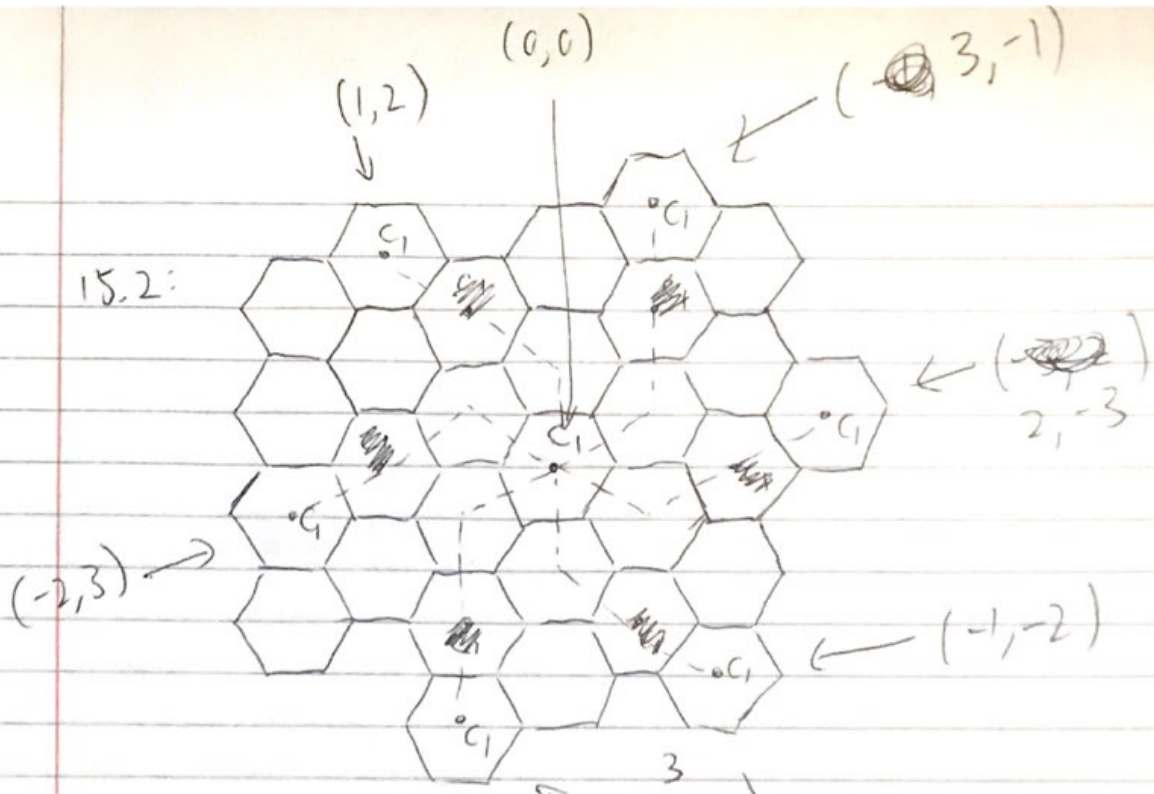


Fig. 1

Fig. 1 shows channel assignment using same method described in 15.2

For $(1,2) \Rightarrow D = \sqrt{3}R\sqrt{1+4+2} = \sqrt{21}R$

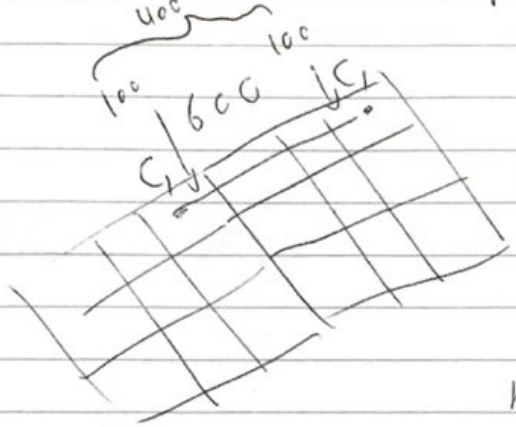
$(-2,3) \Rightarrow D = \sqrt{3}R\sqrt{4+9-6} = \sqrt{21}R$

$(-3,1) \Rightarrow D = \sqrt{3}R\sqrt{9+1-3} = \sqrt{21}R$

And similarly for the reflected coordinates so D is maintained at same value for all the reuse channels //

15.3:

~~number of cells per cluster = 36~~



~~number of cells per cluster~~

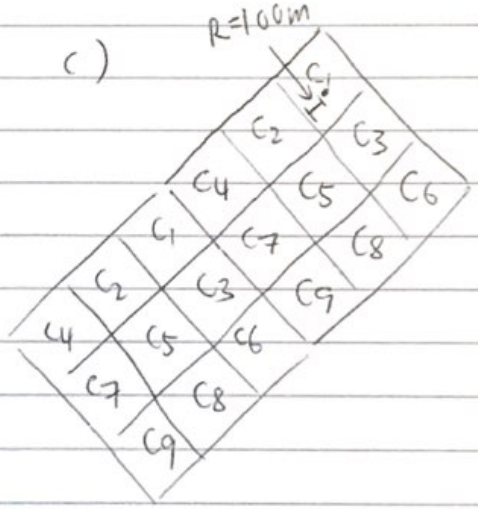
a) $D = 2KR$

$R = 100$, $K = 3$

$N = K^2 = 9$ cells per cluster

b) 50 channels per cell

c)



15.4:

1 km

a) $D = \sqrt{3} R \sqrt{i^2 + j^2 + ij} = 6\,km$

$\sqrt{i^2 + j^2 + ij} = 2\sqrt{3}\ km = \sqrt{12}\ km$

~~$i = 2, j = 2$ works.~~

$N = i^2 + j^2 + ij = 12$ cells per cluster

b) 100 channels per cell

c)