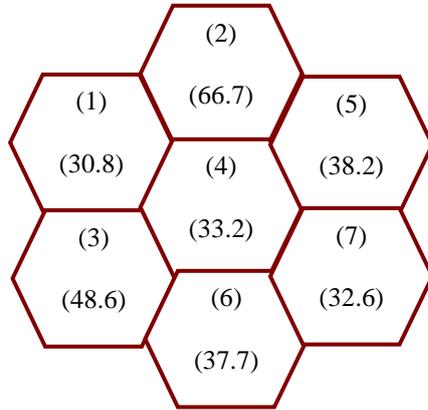


Problem statement

Cell Planning

Carried load in Erlang for a 7-Cell cellular system is given:



Traffic intensity of user $A_u=0.03$ E,

Call holding time $T=120$ s,

Coverage area of system 3000 km^2 .

Find:

- | | |
|---------------------------------------|-------------------------------------|
| 1. Number of channels per cell | 6. User density per km |
| 2. Number of user per cell | 7. Call density per km |
| 3. Number of call per cell | 8. Area of each cell, km^2 |
| 4. Average Number of user per channel | 9. Radius of each cell, km |
| 5. Load per km | 10. Channel reuse ratio |

Cell number	Load, E	Number of users, Nu (Per cell)	Number of call, N_{call} (Per cell, Per hour)	Number of channels, N_{ch} (per cell)
1	30.8			
2	66.7			
3	48.6			
4	33.2			
5	38.2			
6	37.8			
7	32.6			
Total	287.9			