

1. Assign the individual technologies to the corresponding generations of mobile systems:

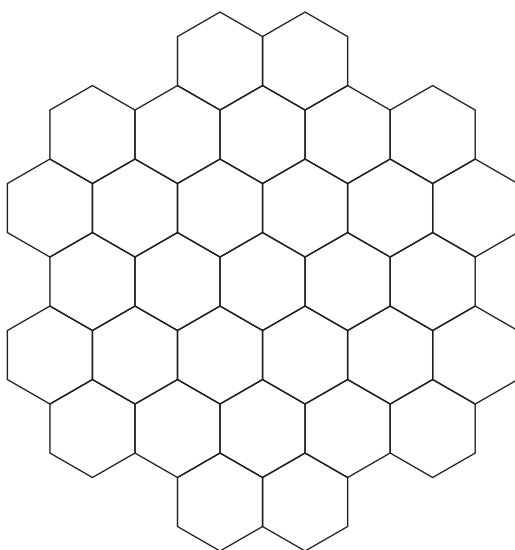
UMTS, NMT, GSM, LTE, LTE-A, CDMA, GPRS, HSPA, EDGE, HSPA+, GSM.

1 st generation	
2 nd generation	
3 rd generation	
4th generation	

2. Sort the types of cells in mobile networks from the smallest (1) to the largest (5).

- ___ microcell
- ___ femtocell
- ___ macrocell
- ___ satellite cell
- ___ picocell

3. Propose and draw a frequency plan (you have 3 frequencies available).



- ① – frequency f_1
- ② – frequency f_2
- ③ – frequency f_3

4. Correct the text so that the following statement is true.

The number of base stations in a network $\left(\begin{smallmatrix} \text{with sectorization} \\ \text{without sectorization} \end{smallmatrix} \right)$ is ___ times $\left(\begin{smallmatrix} \text{higher} \\ \text{lower} \end{smallmatrix} \right)$ than in a network $\left(\begin{smallmatrix} \text{with sectorization} \\ \text{without sectorization} \end{smallmatrix} \right)$.

5. List three basic parameters that characterize the access methods used in mobile networks.

1. _____
 2. _____
 3. _____
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6. Assign the reasons to the corresponding term used for automatic handover.

Internal handover	reason: subscriber mobility	referred to as "hard handover"
External handover	reason: cell optimization	referred to as "soft handover"

7. Identify what physical principle appears during multipath propagation of waves in the individual cases below.

