Question 1: VLSM Subnetting Practice

Using the network diagram and information given below create an addressing scheme which utilizes variable-length subnet masks. This company will be using the class C address **210.70.10.0**. Remember to start with your largest groups first. Fill in the table and show your work in the space below.

**Estimated Completion time is 30 minutes**

Diagram

Description automatically generated

|  |  |
| --- | --- |
| **Subnets** | **Number of hosts** |
| A | 64 |
| B | 50 |
| C | 2 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Subnet**  **Name** | **Number of Required Hosts** | **Subnet Size**  **(Magic #)** | **# of usable hosts** | **Prefix** | **Subnet mask** | **Network ID** | **First Usable IP** | **Last Usable IP** | **Broadcast IP** |
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Fill the table below with IP Address information for each device/interface in both subnets A and B:

1. *Host computer will use the* ***First usable IP address*** *in its respective subnet.*
2. *The router interface will use the* ***Last usable IP address*** *in its respective subnet.*
3. *The switch will use* ***any available address*** *in its subnet.*

|  |  |  |  |
| --- | --- | --- | --- |
| Device | IP address | Subnet Mask | Gateway |
| R1-G0/0 |  |  | N/A |
| PC-A |  |  |  |
| R1-G0/1 |  |  | N/A |
| S1 |  |  |  |
| PC-B |  |  |  |