1. **What are the pillars of Wi-Fi security?**

   Authentication: Verifies who we are.

   Encryption: Protects our data while traveling over the air.

   Integrity: Ensures data is not tampered with during transmission.

2. **Explain the difference between authentication and encryption in WiFi security.**

Authentication	Encryption
Confirms identity (Are you who you claim to be?)	Scrambles data so that only authorized devices can read it.
Happens before connection is fully established.	Happens during/after data transmission.

3. **Explain the differences between WEP, WPA, WPA2, and WPA3**

	WEP	WPA	WPA2	WPA3
Security Level	Very Weak	Better than WEP	Strong	Very Strong
Encryption	RC4 (weak)	TKIP (improved)	AES (strong)	AES with GCMP
Authentication	Shared Key	PSK	PSK	SAE (Simultaneous Authentication of Equals)
Introduced In	1997	2003	2004	2018
Vulnerability	Cracked easily	Vulnerable to TKIP attacks	Safe if strong password	Latest security protections