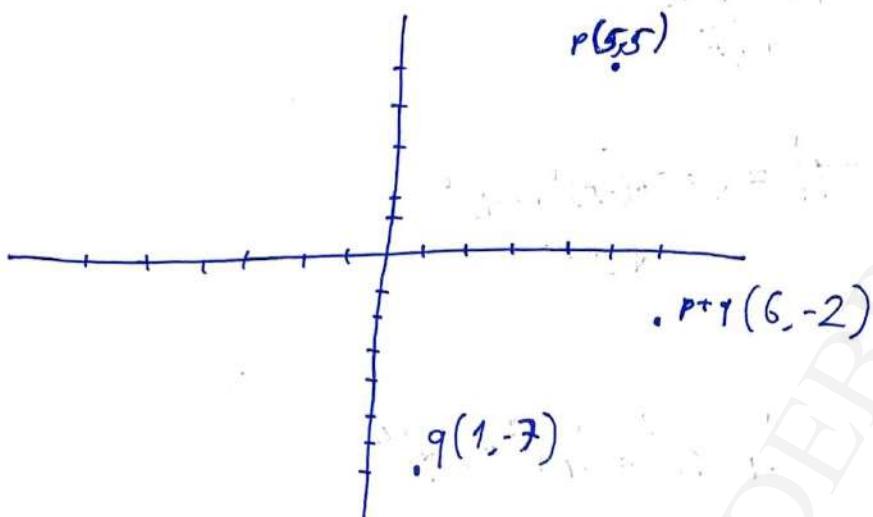


$$1) p = (5, 5) \quad q = (1, -7)$$

$$\begin{array}{r} p+q = (6, -2) \\ p-q = (4, 12) \\ \hline \cdot p-q (4, 12) \end{array}$$



$$|p| = \sqrt{5^2 + 5^2} = 5\sqrt{2} \quad |q| = \sqrt{1^2 + (-7)^2} = 5\sqrt{2}$$

$$|p+q| = \sqrt{6^2 + (-2)^2} = 2\sqrt{10} \quad |p-q| = \sqrt{4^2 + 12^2} = 4\sqrt{10}$$

$$|p+q|^2 = (2\sqrt{10})^2 = 40$$

$$|p|^2 = (5\sqrt{2})^2 = 50$$

$$|q|^2 = (5\sqrt{2})^2 = 50$$