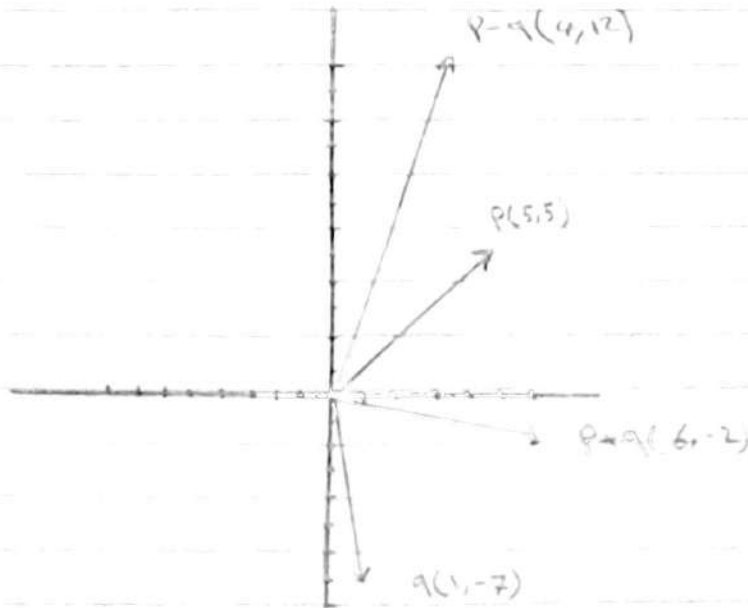1.2.1

$P = (5,5)$, $q = (1,-7)$

A - $P + q = (6,-2)$, $P - q = (4,12)$

B -

C - $|P| = \sqrt{5^2 + 5^2} = \sqrt{50}$

$|q| = \sqrt{1^2 + (-7)^2} = \sqrt{50}$

$|P+q| = \sqrt{6^2 + (-2)^2} = \sqrt{40}$

$|P-q| = \sqrt{4^2 + 12^2} = \sqrt{160}$

D - $|P+q|^2 = (\sqrt{40})^2 = 40$

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

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

So $|P+q|^2 \neq |P|^2 + |q|^2$

Since $40 \neq 50 + 50$