

1.2.13

$$\text{inequal triangle} = |P| + |q| \geq |P+q|$$

$$(|P| + |q|)^2 \geq |P+q|^2$$

$$|P|^2 + 2|Pq| + |q|^2 \geq |P+q|^2$$

$$|P|^2 + 2|Pq| + |q|^2 \geq |P|^2 + 2Pq + |q|^2$$

$$2|Pq| \geq 2Pq$$

since $P \cdot q \geq 0$ so they are in same direction
cannot be equal triangle which approve
as not equal triangle