$$(x_{i} - \bar{x}) < 0, (y_{i} - \bar{y}) > 0 \qquad (x_{i} - \bar{x}) > 0, (y_{i} - \bar{y}) > 0$$

$$\Rightarrow (x_{i} - \bar{x})(y_{i} - \bar{y}) < 0 \qquad \Rightarrow (x_{i} - \bar{x})(y_{i} - \bar{y}) > 0$$

$$(\bar{x}, \bar{y})$$

$$(x_{i} - \bar{x}) < 0, (y_{i} - \bar{y}) < 0 \qquad (x_{i} - \bar{x}) > 0, (y_{i} - \bar{y}) < 0$$

$$\Rightarrow (x_{i} - \bar{x})(y_{i} - \bar{y}) < 0 \qquad \Rightarrow (x_{i} - \bar{x})(y_{i} - \bar{y}) < 0$$