

$$y' = 5x^2 + 2px + 5 > 0$$

$$p > -\frac{5}{2} \frac{x^2 + 1}{x}$$

$$\text{при } x < 0 \quad p < \frac{5}{2} \frac{x^2 + 1}{x} \quad x = -1 \quad p = 5$$

$$\text{при } x > 0 \quad p > -\frac{5}{2} \frac{x^2 + 1}{x} \quad x = 1 \quad p = -5$$

$$p \in (-5; 5)$$