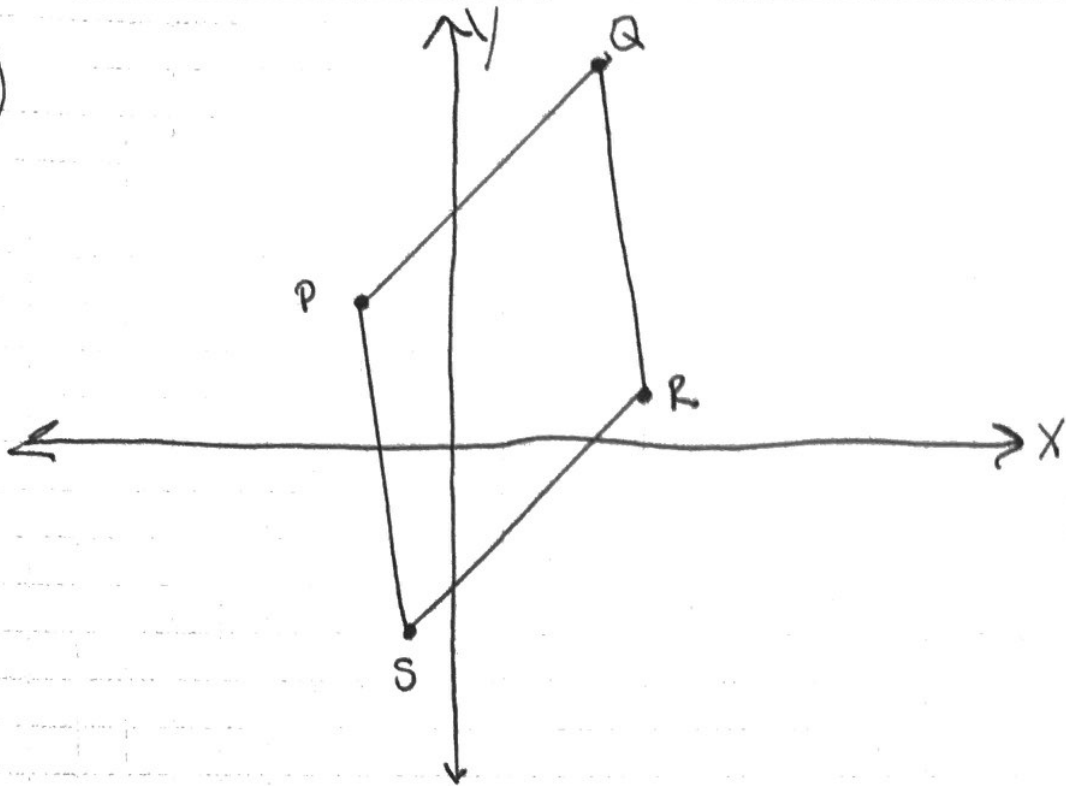


99)



Prove PQRS is a rhombus:

$$m_{\overline{PQ}} = \frac{8-3}{3-2} = \frac{5}{1} = 5$$

$$m_{\overline{RS}} = \frac{-4-1}{-1-4} = \frac{-5}{-5} = 1$$

$$m_{\overline{PS}} = \frac{-4-3}{-1-2} = \frac{-7}{-3} = \frac{7}{3}$$

$$m_{\overline{QR}} = \frac{8-1}{3-4} = \frac{7}{-1} = -7$$

Diagonals:

$$m_{\overline{PR}} = \frac{3-1}{-2-4} = \frac{2}{-6} = -\frac{1}{3}$$

$$m_{\overline{QS}} = \frac{8-4}{3-1} = \frac{4}{2} = 2$$

PQRS is a rhombus b/c it has 2 pairs of \parallel sides and \perp diagonals.

Prove PQRS is NOT a square

Since the slopes are not negative reciprocals of each other, \therefore therefore not \perp , then there is no rt. \angle in PQRS. So PQRS is not a square b/c it does not have a rt. \angle .