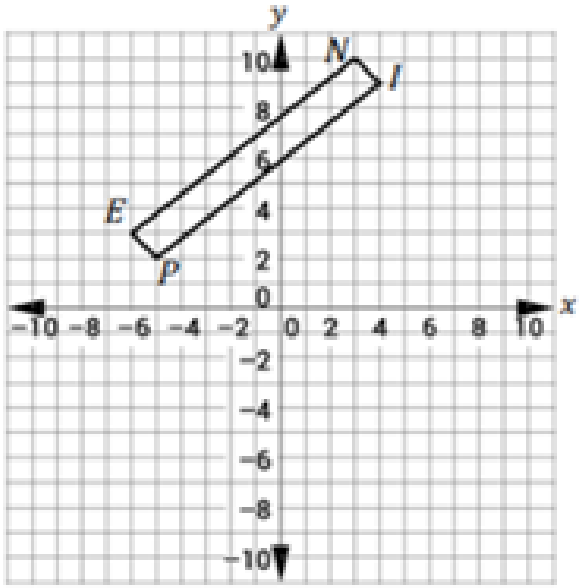
Consider the information and figure below.

Given:
$PINE$ is a quadrilateral with vertices at $P(-5, 2)$, $I(4, 9)$, $N(3, 10)$, and $E(-6, 3)$.



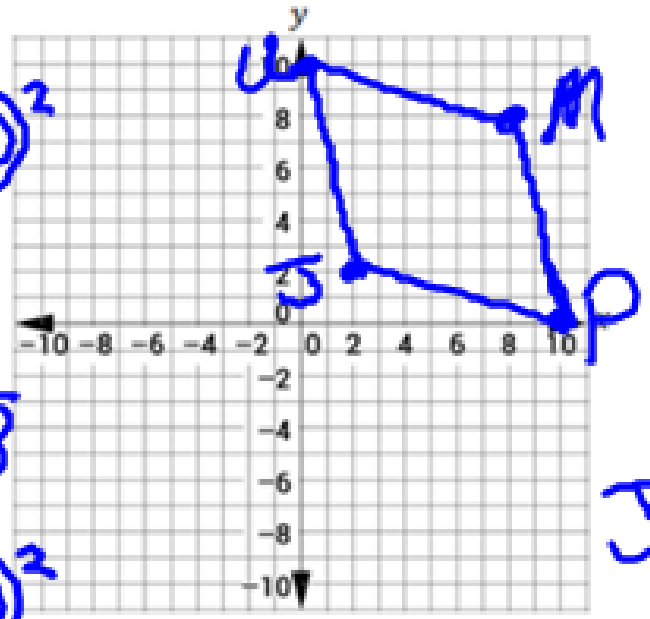
Prove:
$PINE$ is a parallelogram.

Write a paragraph proof based on the above information and diagram.

$\overline{PE}$ has a slope of -1 & $\overline{NI}$ has a slope of -1 so $\overline{PE} \parallel \overline{NI}$
$\overline{EN}$ has a slope of $\frac{7}{9}$ & $\overline{PI}$ has a slope of $\frac{7}{9}$ so $\overline{EN} \parallel \overline{PI}$
Therefore PINE is a //gram by Def.

Consider the information below.

Given: $J(2,2), U(0,10), M(8,8), P(10,0)$.
Prove: $JUMP$ is a rhombus



$JU = \sqrt{(2-0)^2+(2-10)^2}$

$= \sqrt{2^2+(-8)^2}$

$= \sqrt{4+64} = \sqrt{68}$

$MP = \sqrt{(8-10)^2+(8-0)^2}$

$= \sqrt{(-2)^2+8^2}$

$= \sqrt{4+64} = \sqrt{68}$

$UM = \sqrt{(0-8)^2+(10-8)^2}$

$= \sqrt{(-8)^2+(2)^2}$

$= \sqrt{64+4} = \sqrt{68}$

$JP = \sqrt{(2-10)^2+(2-0)^2}$

$= \sqrt{(-8)^2+2^2}$

$= \sqrt{64+4} = \sqrt{68}$

$\overline{JU} \cong \overline{MP} \cong \overline{UM} \cong \overline{JP}$

So JUMP is a rhombus