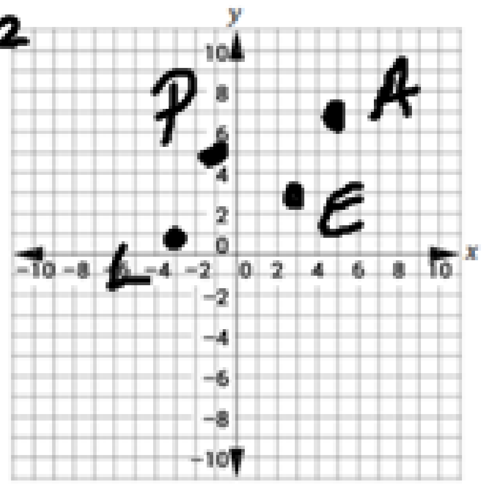
2. Prove that quadrilateral $LEAP$ with vertices $L(-3,1), E(3,3)$, $A(5,7)$, and $P(-1,5)$ is a parallelogram.

$$LP = \sqrt{(-3+1)^2+(1-5)^2}$$
$$= \sqrt{(-2)^2+(-4)^2}$$
$$= \sqrt{4+16} = \sqrt{20}$$
$$LE = \sqrt{(-3-3)^2+(1-3)^2}$$
$$= \sqrt{(-6)^2+(-2)^2}$$
$$= \sqrt{36+4} = \sqrt{40}$$



Which of the following statements help to prove that $LEAP$ is a parallelogram? Select all that apply.

- ● $LE = 2\sqrt{10}$, $EA = 2\sqrt{5}$, $AP = 2\sqrt{10}$, $LP = 2\sqrt{5}$, so $\overline{LE} \cong \overline{AP}$ and $\overline{EA} \cong \overline{LP}$. Opposite sides of a parallelogram are congruent.
- ☐ $LE = EA = AP = LP = 2\sqrt{10}$, so $\overline{LE} \cong \overline{EA} \cong \overline{AP} \cong \overline{LP}$. All sides are congruent, depicting a square, which is a type of parallelogram.
- ● The slope of $\overline{LE}$ and $\overline{AP}$ is $\frac{1}{3}$. The slope of $\overline{EA}$ and $\overline{LP}$ is 2. Since $\overline{LE} \parallel \overline{AP}$ and $\overline{EA} \parallel \overline{LP}$, opposite sides of a parallelogram are parallel.
- ☐ ~~The slope of $\overline{LE}$ and $\overline{AP}$ is $\frac{1}{3}$. Since $\overline{LE} \parallel \overline{AP}$, parallelograms have one pair of parallel sides.~~
- ☐ ~~The slope of $\overline{LE}$ and $\overline{AP}$ is $\frac{1}{3}$, while the slope of $\overline{EA}$ and $\overline{LP}$ is -3. These slopes are opposite reciprocals of each other, so $LEAP$ is a rectangle, which is a type of parallelogram.~~