

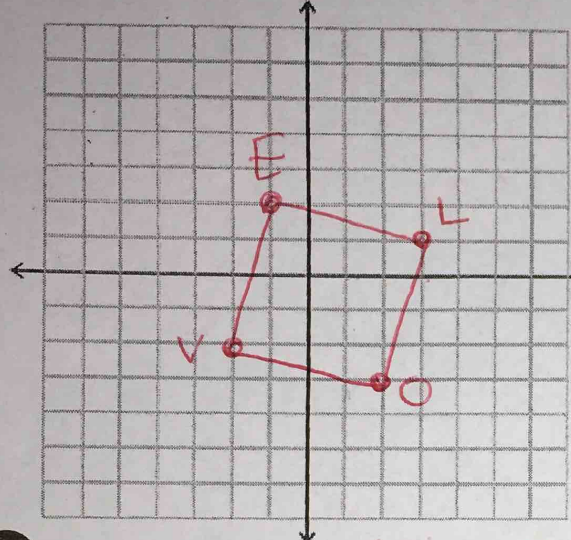
HM3 QUIZ REVIEW

NAME \_\_\_\_\_

State whether the following are always, sometimes, or never true.

1. A trapezoid is a square. N
2. A rhombus is a square. S
3. A rhombus has four equal sides. A
4. A quadrilateral is a trapezoid. S

5. What is the precise name for parallelogram LOVE with vertices L (3, 1), O (2, -3), V (-2, -2), E (-1, 2)



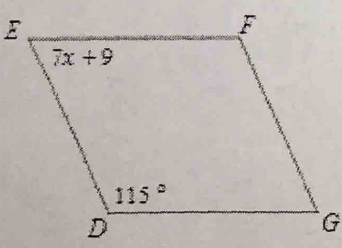
$\overline{EL}$   $m = \frac{2-1}{-1-3} = \frac{1}{-4} = -\frac{1}{4}$   
 $\overline{VO}$   $m = \frac{-3-(-2)}{2-(-2)} = \frac{-1}{4} = -\frac{1}{4}$  } parallel!  
 $\overline{VE}$   $m = \frac{2-(-2)}{-1-(-2)} = \frac{4}{1} = 4$  } opposite reciprocals perpendicular!  
 $\overline{OL}$   $m = \frac{-3-1}{2-3} = \frac{-4}{-1} = 4$  } parallel!

\*since they are  $\perp$  it is either a square or a rectangle

$\overline{EL}$ :  $d = \sqrt{(-1-3)^2 + (2-1)^2} = \sqrt{16+1} = \sqrt{17}$   
 $\overline{LO}$ :  $d = \sqrt{(2-3)^2 + (-3-1)^2} = \sqrt{1+16} = \sqrt{17}$

so its a SQUARE!

6. Find the values of the variables for which the figure is a parallelogram.



consecutive sides are supplementary

$7x+9 + 115 = 180$   
 $7x+124 = 180$   
 $7x = 56$

X=8