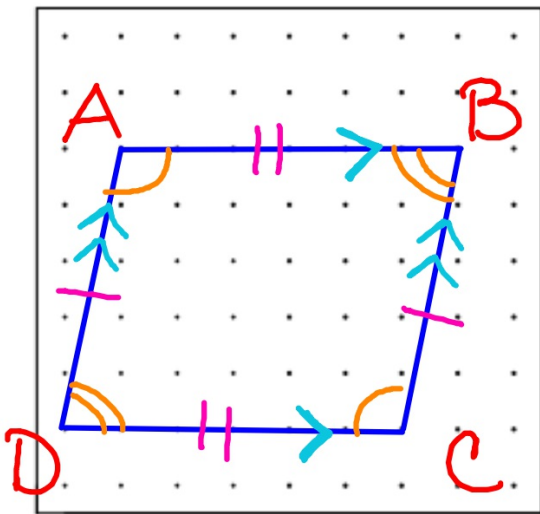


DIAGRAM

OF

PARALLELOGRAM



A parallelogram is a  
quadrilateral with  
opposite sides  
parallel. The  
opposite sides are  
congruent. The  
opposite angles are  
congruent.

DIAGONAL INVESTIGATION

#1

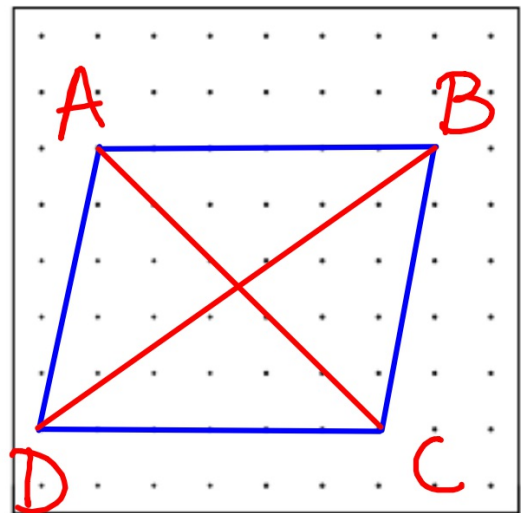
ARE THE DIAGONALS  
CONGRUENT?

NO

$m\overline{AC} =$  \_\_\_\_\_

$m\overline{BD} =$  \_\_\_\_\_

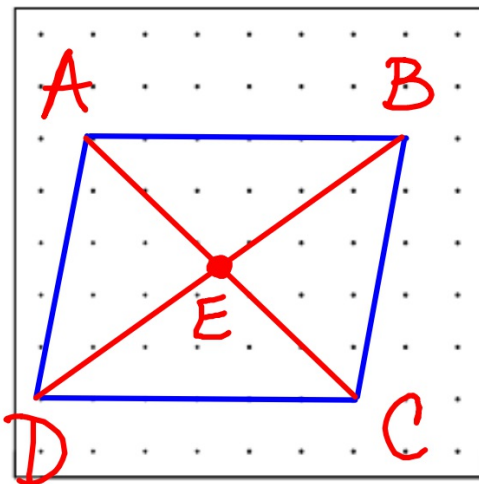
Since  $\overline{AC}$  is not congruent  
to  $\overline{BD}$ , then the diagonals of  
parallelograms not  
congruent.



DIAGONAL INVESTIGATION

#2

DO THE DIAGONALS BISECT  
EACH OTHER?



$$m\overline{DE} = \underline{\hspace{2cm}}$$

$$m\overline{BE} = \underline{\hspace{2cm}}$$

Since  $\overline{DE} \cong \overline{BE}$

then diagonal  $\overline{DB}$

is bisected by  $\overline{AC}$ .

$$m\overline{AE} = \underline{\hspace{2cm}}$$

$$m\overline{CE} = \underline{\hspace{2cm}}$$

Since  $\overline{AE} \cong \overline{CE}$

then diagonal  $\overline{AC}$

is bisected by  $\overline{DB}$ .