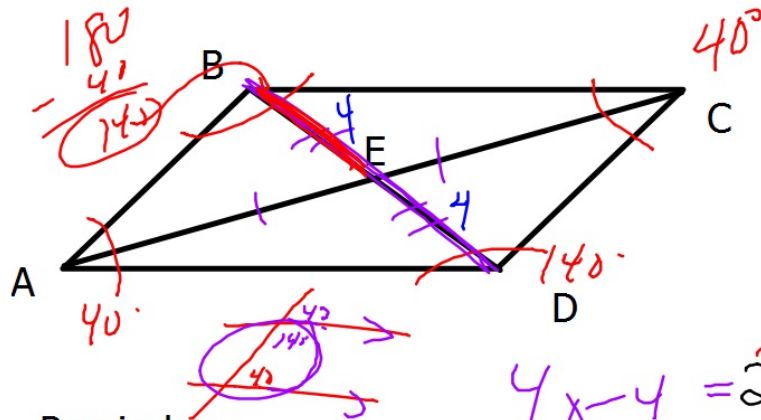


Good afternoon: please do warm up in notebooks



Reminders:

- Assess on Monday
- Reassess in DS tomorrow or next wk
- Q2 ends 12/15

$$4x - 4 = 2(x + 1)$$

$$4x - 4 = 2x + 2$$

$$4x = 2x + 6$$

$$2x = 6$$

$$x = 3$$

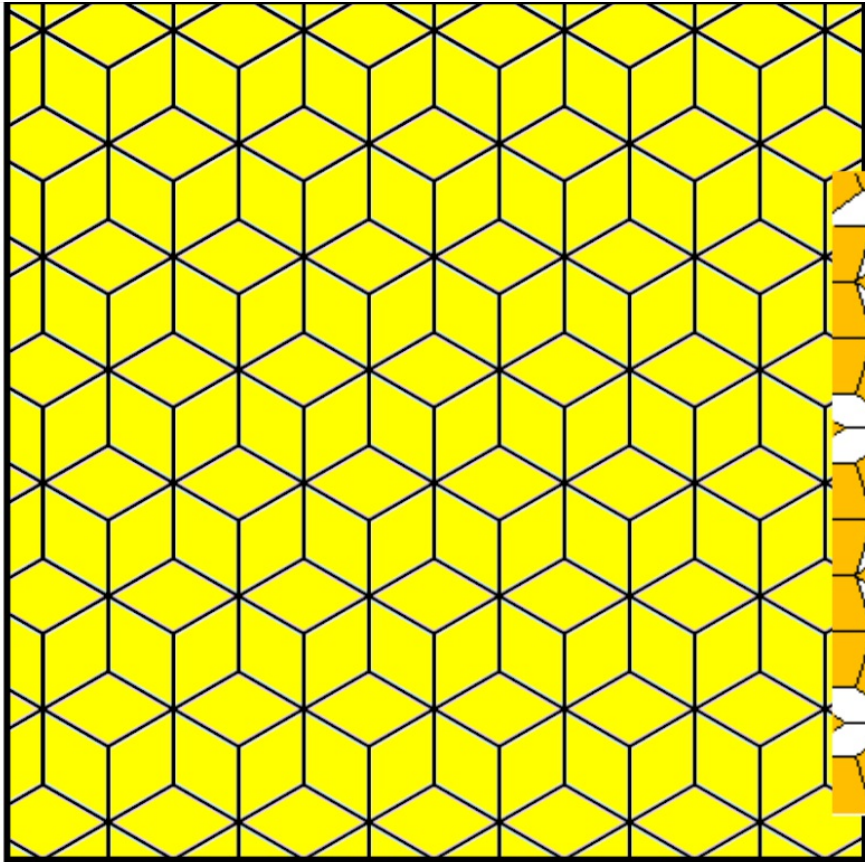
**You will need your textbook today**

ABCD is a parallelogram.

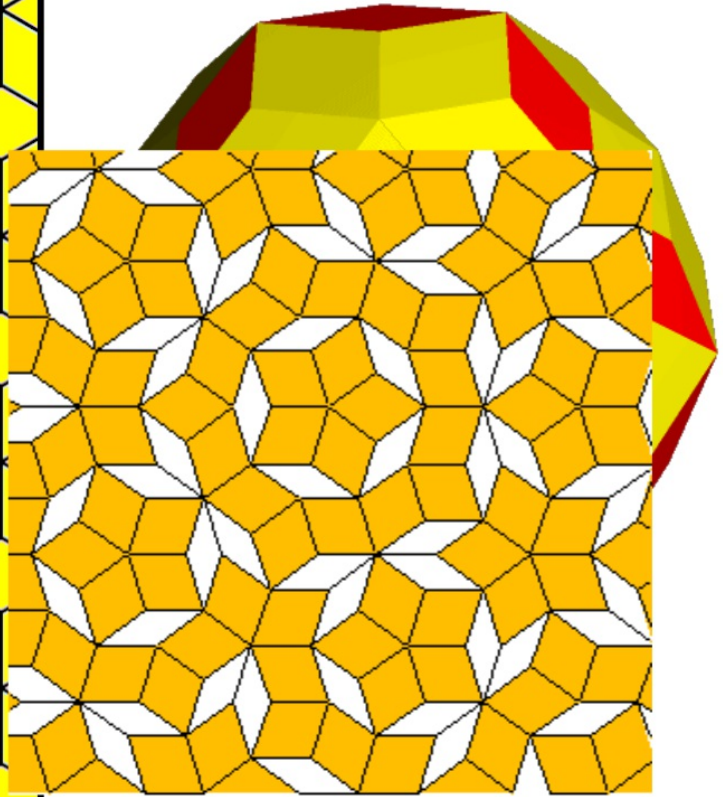
If  $BD = 4x - 4$  and  $EB = x + 1$   
Find the length of ED. 4

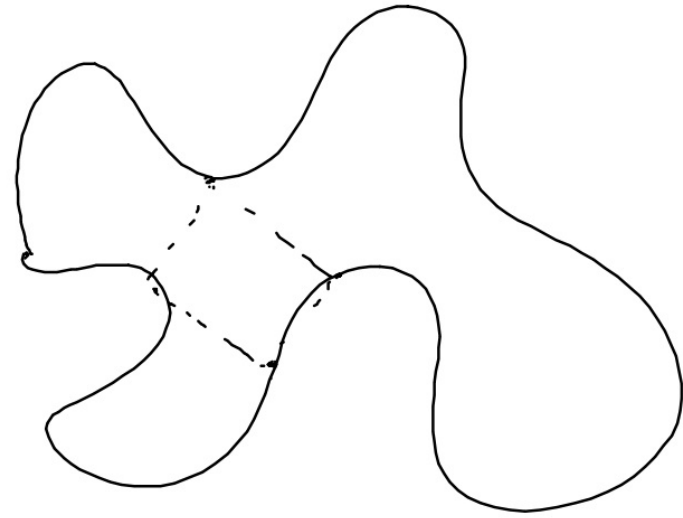
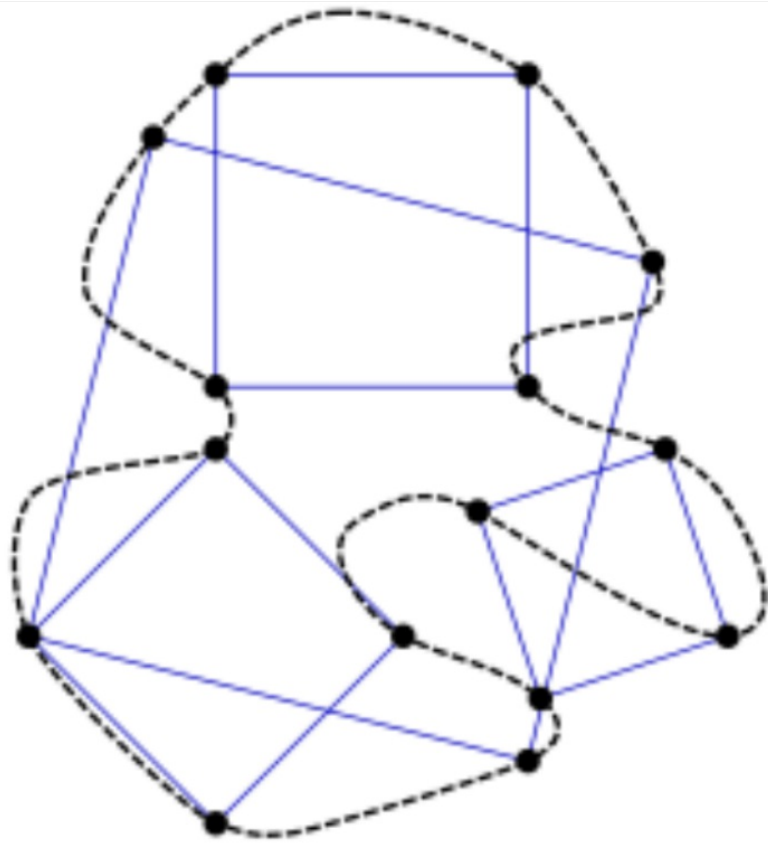
If  $\angle BAD = 40^\circ$ , find angles

- $\angle ABC$
- $\angle BCD$
- $\angle CDA$



Rhombi

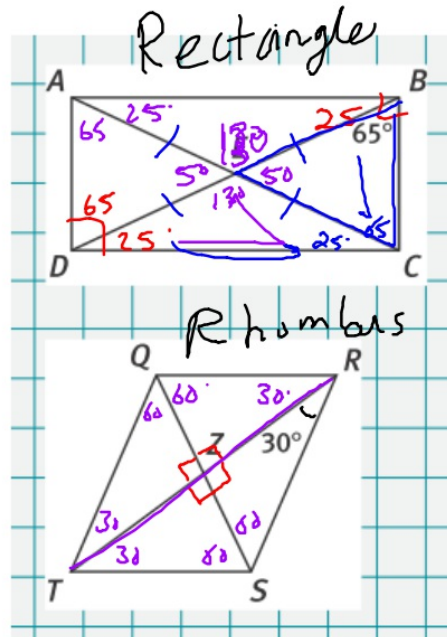




More Practice:

p220  
#20  
#21

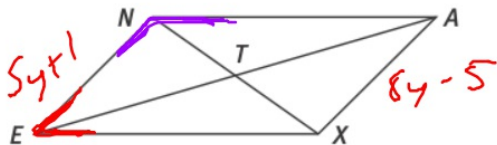
(instructions: find all the angles)



p 221  
#5 a and d  
#9  
#10



5. Quadrilateral  $XENA$  is a parallelogram.  $T$  is the point of intersection of the diagonals. For each situation, write an equation and solve for  $y$ .



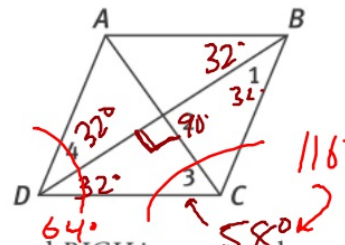
- a.  $EN = 5y + 1$  and  $AX = 8y - 5$   $y = 2$   
 b.  $m\angle ANX = 3y - 1$  and  $m\angle NXE = 2y + 1$   
 c.  $ET = y - 1$  and  $EA = 3y - 10$   
 d.  $m\angle ANE = 7y - 5$  and  $m\angle NEX = 3y + 5$

$$7y - 5 + 3y + 5 = 180$$

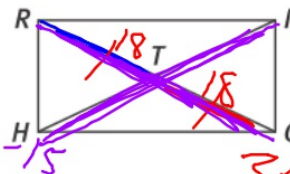
$$y = 18$$

P. 221

9. Given quad  $ABCD$  is a rhombus and  $m\angle ABD = 32^\circ$ . Find the measure of each numbered angle.



10. Given quad  $RIGH$  is a rectangle.



- a. If  $RT = 18$ , then  $RG = 36$ .  
 b. If  $RG = 4x + 12$  and  $HI = 10x - 15$ , then  $x = 4.5$ .

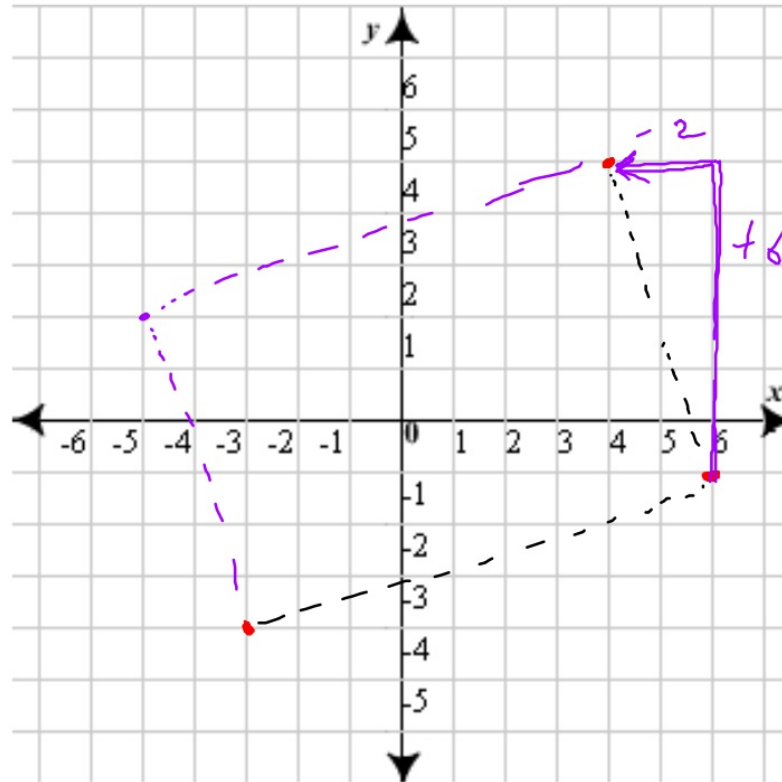
### Cartesian Quadrilateral:

The following 3 points are vertices of a rectangle. Find the 4th vertex's coordinates.

$(4,5)$

$(-3,-4)$

$(6,-1)$



Proving a Quadrilateral is a....

$$\left( \frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

- Parallelogram:

Show that the diagonals' midpoints are the same

- Rectangle:

Show that the diagonals have the same length  
and show midpoints are the same.

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$
$$\text{or } a^2 + b^2 = c^2$$

- Rhombus:

Show that the diagonals have perpendicular slopes

And have the same midpoint

$$\frac{y_2 - y_1}{x_2 - x_1}$$

opposite reciprocal.  $\frac{a}{b} \rightarrow -\frac{b}{a}$

$$\frac{y_2 - y_1}{x_2 - x_1}$$

- Square:

Show that the diagonals have the same length, midpoint, and perpendicular slopes

## Practice Assessment

Complete it for Monday; real assessment will be Monday