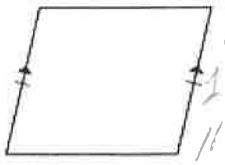
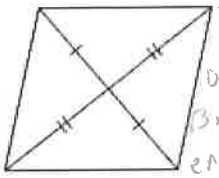
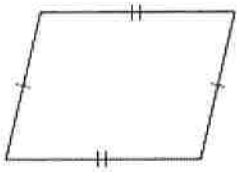
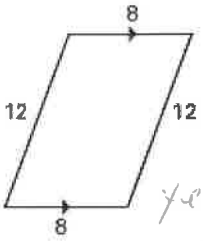
Name _____ Date _____

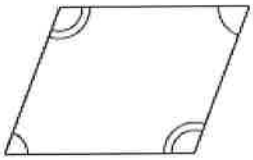
Determine if the quadrilateral is a parallelogram. If it is, what rule was used to determine that it is a parallelogram?

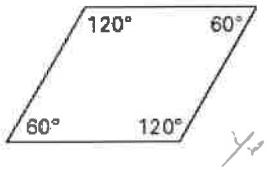
1. 

2. 

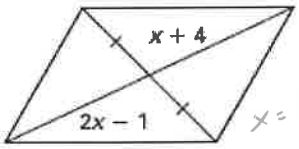
3. 

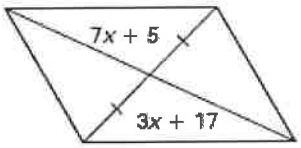
4. 

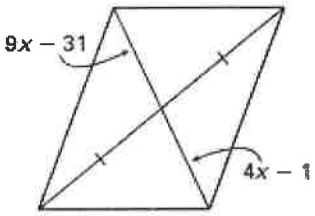
5. 

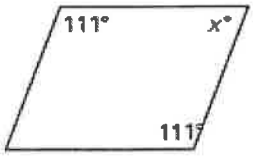
6. 

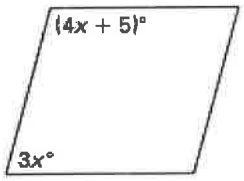
Find the value of x that makes the figure a parallelogram.

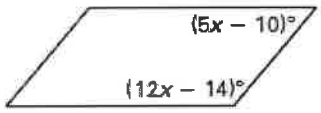
7. 

8. 

9. 

10. 

11. 

12. 

Determine whether a figure with the given vertices is a parallelogram. Use the method indicated.

METHOD ONE: use distance and slope formula
Show that one pair of sides are both congruent & parallel.

EITHER AB ≅ DC or AD ≅ BC

AB d = 5.39 ≅

DC d = 5.39 ≅ & //

AB m = 2/5

DC m = 2/5 //

parallelogram

METHOD TWO: use distance formula
Show that both pairs of opposite sides are congruent.

AB d = 5.39

DC d = 5.39

BOTH PAIRS of opp sides ≅

AD d = 4.24

BC d = 4.24

parallelogram

METHOD THREE: use slope formula
Show that both pairs of opposite sides are parallel.

AB m = 2/5

CD m = 2/5

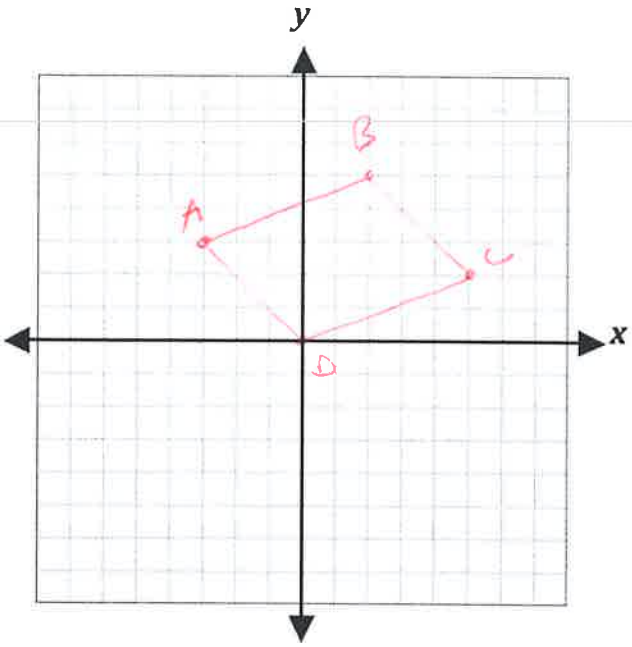
AD m = -1

BC m = -1

BOTH PAIRS opp sides //

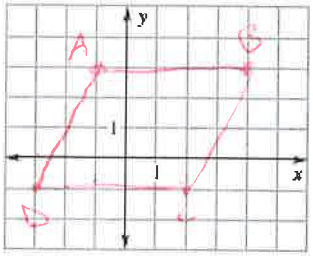
parallelogram

Graph the points: A(-3,3), B(2,5), C(5,2), D(0,0)



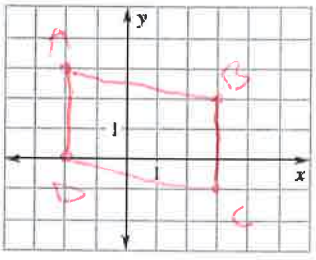
The vertices of quadrilateral *ABCD* are given. Draw *ABCD* in a coordinate plane and show that it is a parallelogram.

13. $A(-1, 3), B(4, 3), C(2, -1), D(-3, -1)$



parallelogram

14. $A(-2, 3), B(3, 2), C(3, -1), D(-2, 0)$



parallelogram