GEOMETRY
CHAPTER 6 REVIEW
*Properties of Quadrilaterals*

1. Tell whether each statement is sometimes, always, or never true.
   a. A square is a rectangle.
   b. A parallelogram is a rectangle.
   c. A rectangle is a square.
   d. A rhombus is a rectangle.
   e. A rectangle is a parallelogram
   f. A rhombus is a square
   g. A parallelogram is a rhombus
   h. A square is a rhombus
   i. A rectangle is a quadrilateral

2. Which statement(s) is/are <u>NOT</u> true of a parallelogram?

   a. Diagonals of a parallelogram are congruent.
   b. Opposite angles of a parallelogram are congruent.
   c. Opposite sides of a parallelogram are both parallel
      and congruent.
   d. Consecutive angles of a parallelogram are always
      supplementary.
   e. Diagonals bisect and intersect to form right angles.
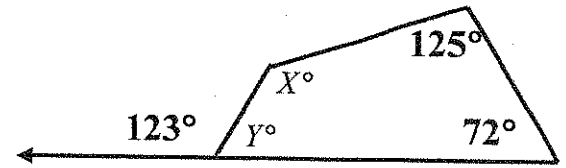   f. Diagonals are congruent.

3. Given: Quadrilateral with an exterior angle measure of 142°

   Find: x=_____   y=_____
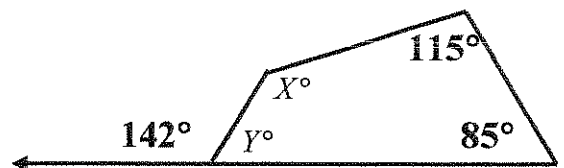
4. Given: Quadrilateral with an exterior angle measure of 123°

Find: x=_____   y=_____

$125°$

$X°$

$123°$ $Y°$

$72°$

5. Use the Parallelogram to the right determine the m∠ABC.
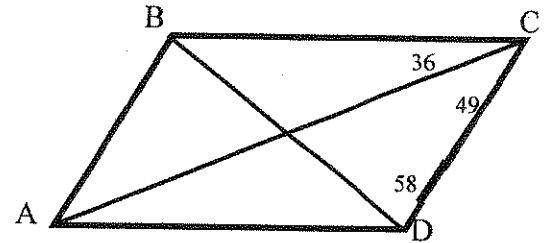
B

C

36

49

58

A

D

6. Use the Parallelogram to the right determine the m∠ABC.

28

52

48

A

D

7. Find the length of the following trapezoid's midsegment.

$x + 7$

$x + 5$

$4x - 5$
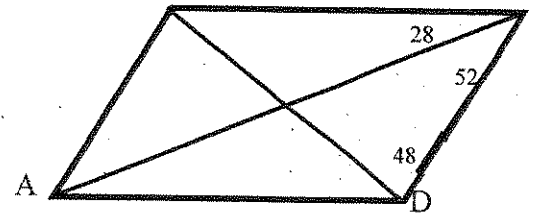
8. Find the length of the following trapezoid's midsegment.

$3k - 2$

$2k + 5$

$4k + 2$
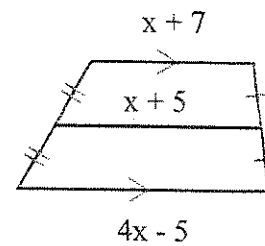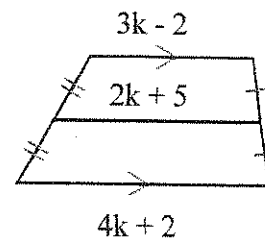
9. Given the parallelogram, find the coordinates for point M.

(2,4)   (6,4)

(0,0)   (4,0)

M
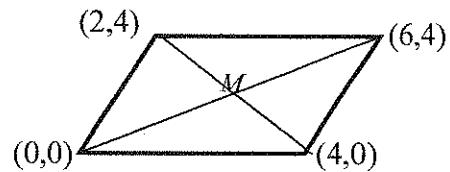
10. Given the parallelogram, find the coordinates for point M.
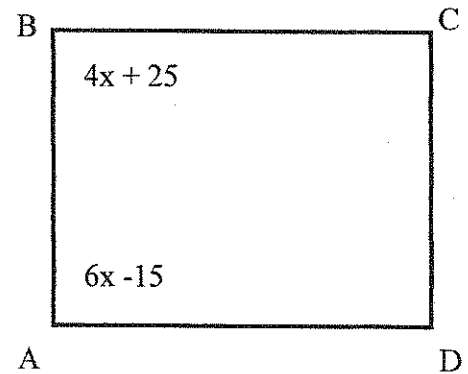
(−2,6)   (4,6)

(−6,0)   (0,0)

M
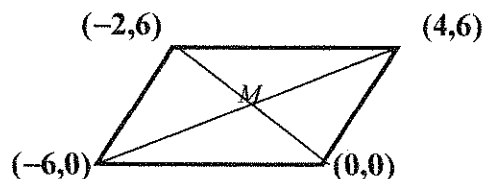
11. What point could be the coordinates of the fourth vertex of parallelogram ABCD with A(1,3), B(8,5), and D(-1,-1)?

Y

X
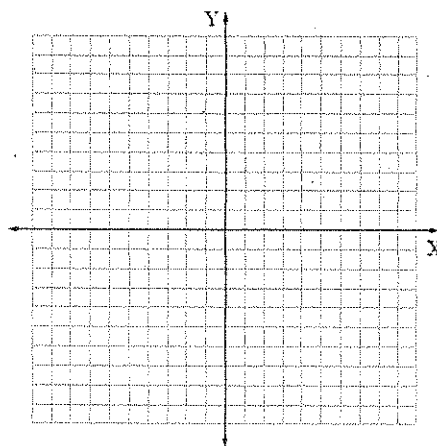
12. If the interior angles sum of a regular polygon is equal to 1260^0 name the polygon. *You must show work to receive credit.*

13. Given the parallelogram ABCD, what is the measure
    of ∠ADC?

B _____ C

    $4x + 25$

    $6x - 15$

A   D

14. Considering the angles, sides and diagonals of each, compare and contrast a parallelogram and a rectangle.

15. Considering the angles, sides and diagonals of each, compare and contrast a Rhombus and a trapezoid.