

### Unit 5 Intervention/Prevention – Ticket to Retake

1. How do you find the sum of the **interior** angles of a regular shape?

2. How do you find the sum of the **exterior** angles of a regular shape?

3. The sum of the interior and exterior angles of:

Quadrilateral: # of sides \_\_\_\_\_ Interior sum: \_\_\_\_\_ Exterior sum: \_\_\_\_\_

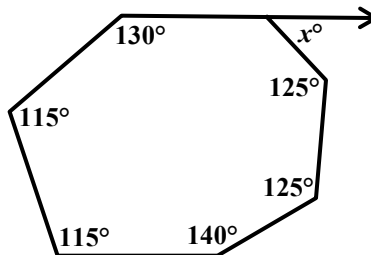
Hexagon: # of sides \_\_\_\_\_ Interior sum: \_\_\_\_\_ Exterior sum: \_\_\_\_\_

Octagon: # of sides \_\_\_\_\_ Interior sum: \_\_\_\_\_ Exterior sum: \_\_\_\_\_

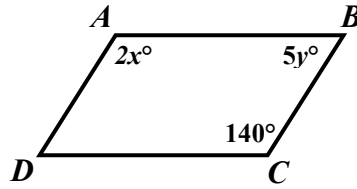
4. A regular polygon has an interior angle with a measure of  $120^\circ$ .  
How many **sides** does the polygon have? 4. \_\_\_\_\_

5. What is the sum of the **exterior** angles in a convex 13-sided polygon? 5. \_\_\_\_\_

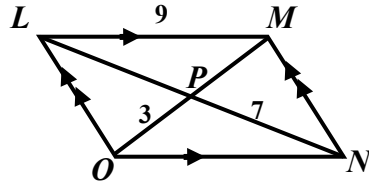
6. What is the value of  $x$ ? 6. \_\_\_\_\_



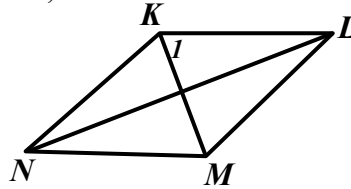
7. What are the values of the variables in parallelogram  $ABCD$ ? 7. \_\_\_\_\_



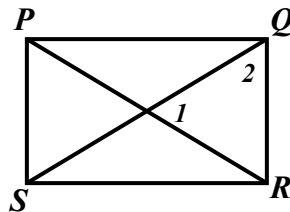
8. What is the length of  $\overline{LP}$ ? 8. \_\_\_\_\_



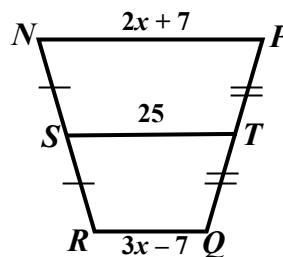
9. If  $KLMN$  is a rhombus, and  $m\angle KLM = 70^\circ$ ,  
What is the measure of  $\angle 1$ ? 9. \_\_\_\_\_



10. In rectangle  $PQRS$ ,  $m\angle 1 = 70^\circ$ . What is  $m\angle 2$ ? 10. \_\_\_\_\_

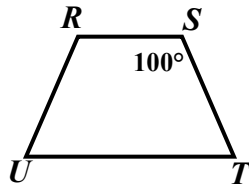


11.  $NPQR$  is a trapezoid and  $ST = 25$ .  
Find the value of  $x$ . 11. \_\_\_\_\_



12.  $RSTU$  is an isosceles trapezoid. What is the measure of  $\angle U$  ?

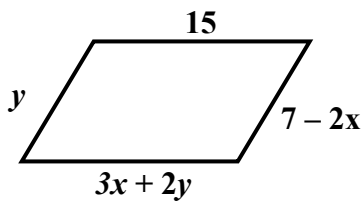
12. \_\_\_\_\_



13. Find the values of  $x$  and  $y$  in the parallelogram shown.

$x =$  \_\_\_\_\_

$y =$  \_\_\_\_\_



Rule/Property used to solve for  $x$  and  $y$ :

14.  $ABCD$  is a **rhombus**. Find/solve for the following:

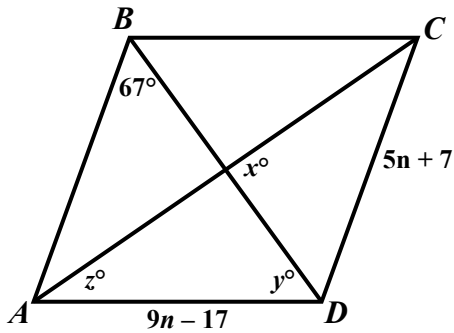
$x =$  \_\_\_\_\_

$y =$  \_\_\_\_\_

$z =$  \_\_\_\_\_

$n =$  \_\_\_\_\_

$BC =$  \_\_\_\_\_



Rule/Property used to solve for:

$x$

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$y$

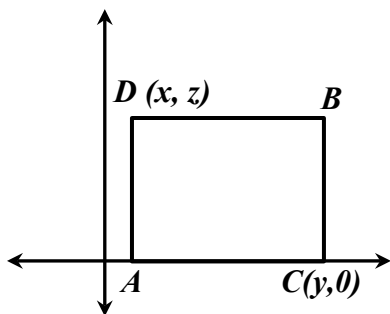
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$z$

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$n$

15. Find the coordinates of  $D$  and  $E$  without using any new variables, and then find the midpoints of  $\overline{GF}$  and  $\overline{DE}$  for rectangle DGEF below.



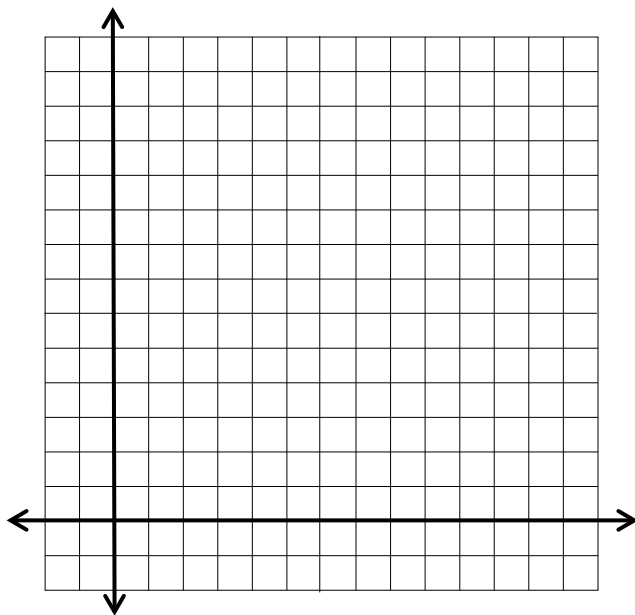
A ( \_\_\_\_\_ , \_\_\_\_\_ )

B ( \_\_\_\_\_ , \_\_\_\_\_ )

Midpoint of  $\overline{DC}$  ( \_\_\_\_\_ , \_\_\_\_\_ )

Midpoint of  $\overline{AB}$  ( \_\_\_\_\_ , \_\_\_\_\_ )

16. Three of the vertices of a parallelogram are  $A(3, 7)$ ,  $B(3, 2)$ , and  $C(6, 3)$ . Find the coordinates of the fourth point,  $D$ . Justify mathematically how you found your point and place your parallelogram on the graph.



16. ( \_\_\_\_\_ , \_\_\_\_\_ )

Write your mathematical justification below:

17. Place a check in the correct box indicating if each statement is *Always*, *Sometimes* or *Never* true.

	<i>Always</i>	<i>Sometimes</i>	<i>Never</i>
A rectangle is a square			
A square is a rhombus			
A rhombus is a rectangle			
The diagonals of a parallelogram are perpendicular			

