

Math 2 Unit 5
Review Worksheet

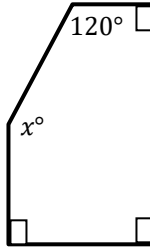
Name: _____
Date: _____ Per: _____

[1-20] Show all work for each problem.

NOTE: Diagrams are not drawn to scale.

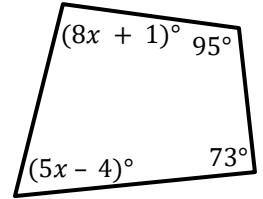
1. What is the value of x ?

- A. 540°
- B. 390°
- C. 150°
- D. 120°



2. Determine the value of x .

- A. 15
- B. 15.4
- C. 9
- D. 19.8



3. Determine the sum of the exterior angles of an octagon.

- A. 1440°
- B. 1080°
- C. 360°
- D. 135°

4. Determine the measure of each interior angle of a regular sided polygon with 9 sides.

- A. 1620°
- B. 180°
- C. 1260°
- D. 140°

5. Determine the measure of each exterior angle of a regular polygon with 12 sides.

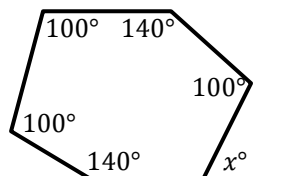
- A. 30°
- B. 150°
- C. 216°
- D. 36°

6. The measure of an interior angle of a regular polygon is 162° . How many sides does the polygon have?

- A. 18 sides
- B. 20 sides
- C. 16 sides
- D. 10 sides

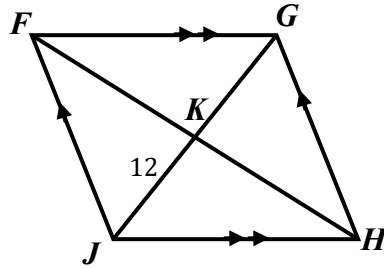
7. Determine the value of x ?

- A. 80°
- B. 40°
- C. 60°
- D. 20°

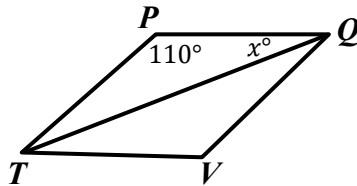


8. Find the number of sides for a regular polygon if each exterior angle has a measure of 15° .
- A. 2340
 - B. 180
 - C. 24
 - D. 26

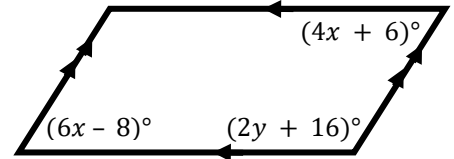
9. If $FH = 30$, find FK .
- A. 12
 - B. 18
 - C. 15
 - D. 30



10. $PQVT$ is a rhombus. Determine the value of x .
- A. 110°
 - B. 55°
 - C. 70°
 - D. 35°



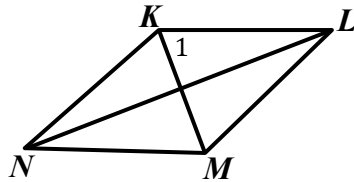
11. What are the values of the variables in the given parallelogram?
- A. $x = 7, y = 9$
 - B. $x = 7, y = 65$
 - C. $x = 5, y = 71$
 - D. $x = 3, y = 77$



Rule/Property used to solve for:
x
y

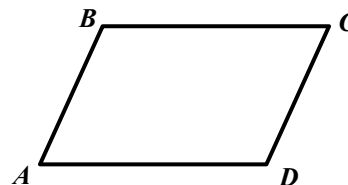
12. If $KLMN$ is a rhombus, and $m\angle KLM = 70^\circ$, what is the measure of $m\angle 1$?

- A. 55°
- B. 50°
- C. 35°
- D. 90°



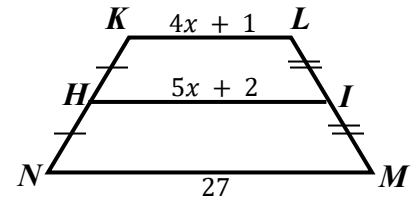
13. Which statements are true for a parallelogram? Select **all** that apply.

- A. $m\angle A + m\angle B = 180^\circ$
- B. $m\angle A + m\angle C = 180^\circ$
- C. $\angle A \cong \angle D$
- D. $\overline{BC} \cong \overline{AD}$
- E. $\angle A \cong \angle C$



14. Determine the length of \overline{KL} in the trapezoid shown.

- A. 26
- B. 4
- C. 13
- D. 17



Rule/Property used to solve for x :

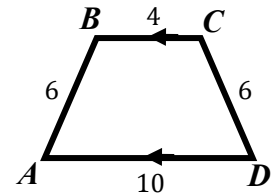
15. a) If $m\angle A$ is 80° , find the measures of:

$m\angle B = \underline{\hspace{2cm}}$

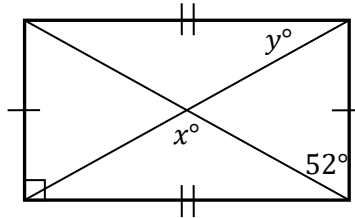
$m\angle C = \underline{\hspace{2cm}}$

$m\angle D = \underline{\hspace{2cm}}$

b) What type of quadrilateral is $ABCD$? Be as specific as possible.



16. Determine the values of x and y .

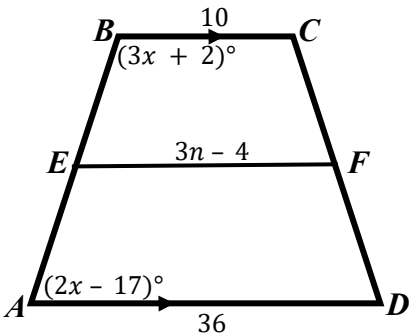


$x = \underline{\hspace{2cm}}$

$y = \underline{\hspace{2cm}}$

Rules/Properties used to solve for x :

17. $ABCD$ is an isosceles trapezoid with midsegment \overline{EF} . Determine the following:



$n = \underline{\hspace{2cm}}$

$EF = \underline{\hspace{2cm}}$

$x = \underline{\hspace{2cm}}$

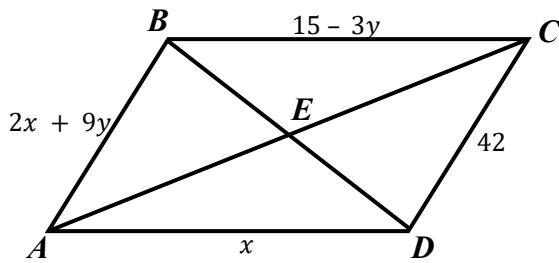
$m\angle ADC = \underline{\hspace{2cm}}$

Rules/Properties used to solve for:

x

n

18. $ABCD$ is a parallelogram. Determine the following:

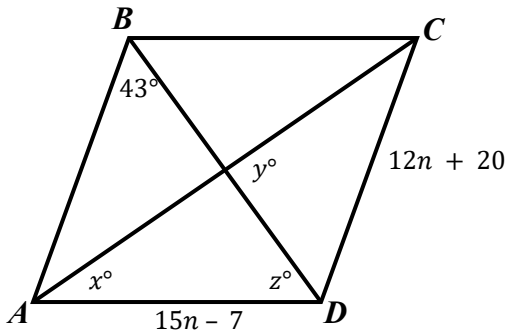


$$x = \underline{\hspace{2cm}}$$

$$y = \underline{\hspace{2cm}}$$

Rule/Property used to solve for x and y :

19. $ABCD$ is a rhombus. Determine the following:



$$x = \underline{\hspace{2cm}}$$

$$y = \underline{\hspace{2cm}}$$

$$n = \underline{\hspace{2cm}}$$

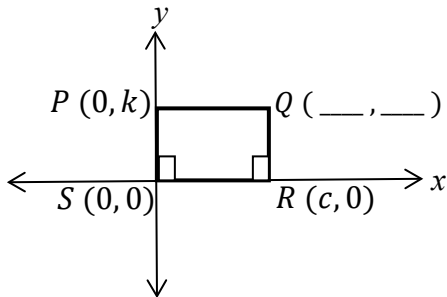
$$z = \underline{\hspace{2cm}}$$

Rule/Property used to solve:

y

n

20. For rectangle $SPQR$ find the coordinates of Q (without using any new variables), and find the midpoints of \overline{PR} and \overline{SQ} .

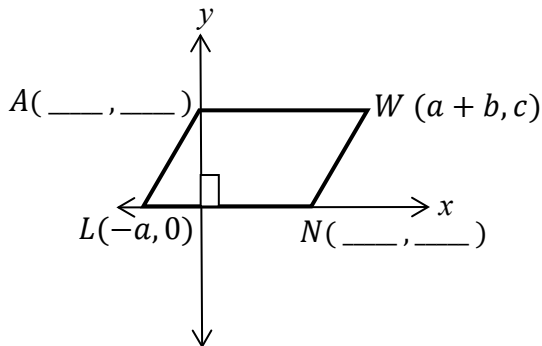


$$Q (\underline{\hspace{1cm}}, \underline{\hspace{1cm}})$$

$$\text{Midpoint of } \overline{PR} (\underline{\hspace{1cm}}, \underline{\hspace{1cm}})$$

$$\text{Midpoint of } \overline{SQ} (\underline{\hspace{1cm}}, \underline{\hspace{1cm}})$$

21. For parallelogram $AWNL$ find the coordinates of A and N (without using any new variables), and find the midpoints of \overline{AN} and \overline{LW} .



$$A (\underline{\hspace{1cm}}, \underline{\hspace{1cm}})$$

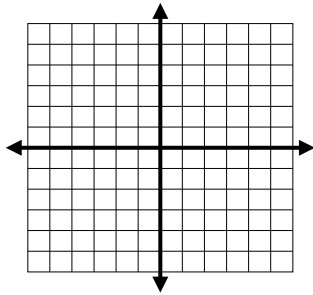
$$N (\underline{\hspace{1cm}}, \underline{\hspace{1cm}})$$

$$\text{Midpoint of } \overline{AN} (\underline{\hspace{1cm}}, \underline{\hspace{1cm}})$$

$$\text{Midpoint of } \overline{LW} (\underline{\hspace{1cm}}, \underline{\hspace{1cm}})$$

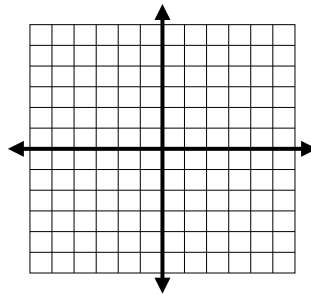
22. Plot the points $A(1, -1)$, $B(2, -4)$ and $C(4, -2)$

A. Plot a fourth point D in quadrant 4 that will make a parallelogram.



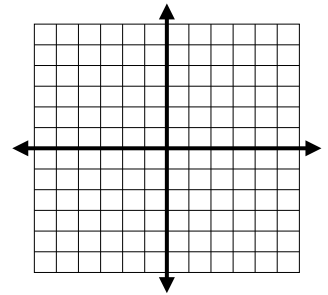
Explain why the quadrilateral formed is a parallelogram using the slope formula.

B. Plot a fourth point D in quadrant 3 that will make a parallelogram.



Explain why the quadrilateral formed is a parallelogram using the midpoint formula.

C. Plot a fourth point D in quadrant 1 that will make a parallelogram.

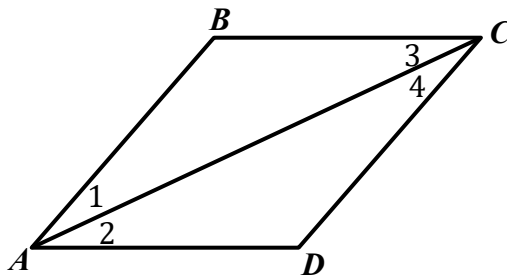


Explain why the quadrilateral formed is a parallelogram using the distance formula.

23. Determine whether 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 trapezoid is a parallelogram.			
The diagonals of a parallelogram are perpendicular.			
The sides of a parallelogram are congruent.			

24. Samantha must prove this theorem:
If $\overline{AB} \cong \overline{DC}$ and $\overline{BC} \cong \overline{DA}$, then $ABCD$ is a parallelogram.



$\overline{AB} \cong \overline{DC}$ and $\overline{BC} \cong \overline{DA}$ because of given information. $\overline{AC} \cong \overline{AC}$ by the reflexive property.
 $\triangle ABC \cong \triangle CDA$ by the _____ theorem. $\angle 1 \cong \angle 4$ and $\angle 2 \cong \angle 3$ because corresponding parts of congruent triangles are congruent. $\overline{AB} \parallel \overline{DC}$ and $\overline{BC} \parallel \overline{AD}$ because if alternate interior angles are congruent then the lines are parallel. $ABCD$ is a parallelogram by definition of parallelogram.

Which choice correctly fills in the blank line in the paragraph proof?

- A. SAS
- B. ASA
- C. AAS
- D. SSS
- E. HL
- F. CPCTC