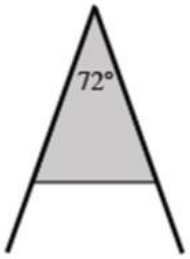
Closure Packet – Chapter 7 Name _____

Show all work neatly, and circle your answers.

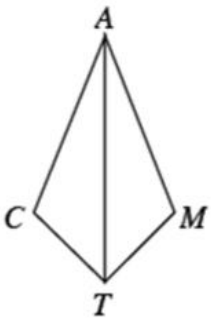
CL 7-147. Julius set his hinged mirror so that its angle was 72° and the core region was isosceles, as shown at right.



a. How many sides did his resulting polygon have? Show how you know.

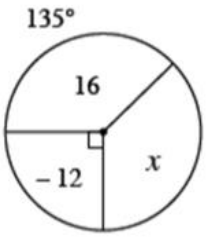
b. What is another name for this polygon?

CL 7-148. Kelly started the proof below to show that if $\overline{TC} \cong \overline{TM}$ and $\overline{AT}$ bisects $\angle CTM$, then $\overline{CA} \cong \overline{MA}$. ~~Copy and~~ complete her proof.



Statements	Reasons
1. $\overline{TC} \cong \overline{TM}$ and $\overline{AT}$ bisects $\angle CTM$	
2.	Definition of bisect
3. $\overline{AT} \cong \overline{AT}$	
4.	
5.	$\cong \triangle s \rightarrow \cong$ parts

CL 7-149. Examine the spinner at right.

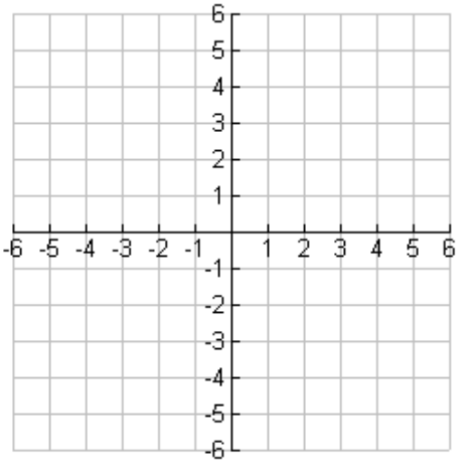


a. Find the expected value of the spinner if $x = 4$.

b. Find the expected value of the spinner if $x = -8$.

c. Find x so that the expected value of the spinner is 6.

CL 7-150. *ABCD* is a parallelogram. If $A(3, -4)$, $B(6, 2)$, $C(4, 6)$, then what are the possible locations of point *D*? Draw a graph and justify your answer.



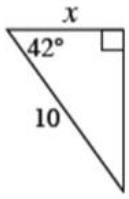
CL 7-151. Each problem below gives the endpoints of a segment. Find the coordinates of the midpoint of the segment.

a. $(-3, 11)$ and $(5, 6)$

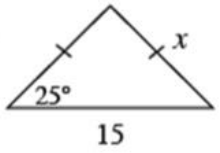
b. $(-4, -1)$ and $(8, 9)$

CL 7-152. For each diagram below, solve for the variable.

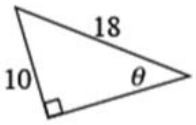
a.



b.



c.



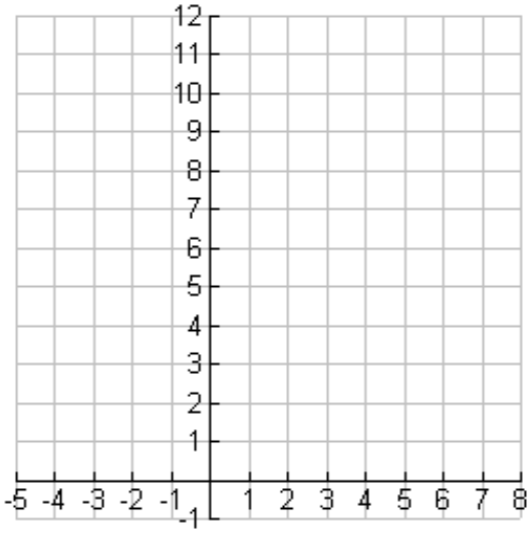
CL 7-153. On graph paper, draw quadrilateral *MNPQ* if $M(1, 7)$, $N(-2, 2)$, $P(3, -1)$, and $Q(6, 4)$. **a blank coordinate plane is on the next page.

a. Find the slopes of $\overline{MN}$ and $\overline{NP}$. What can you conclude about $\angle MNP$?

b. What is the best name for *MNPQ*? Justify your answer.

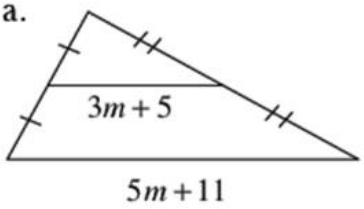
c. Which diagonal is longer? Explain how you know your answer is correct.

d. Find the midpoint of $\overline{MN}$.

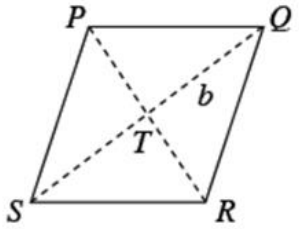


CL 7-154. Examine the geometric relationships in each of the diagrams below. For each one, write and solve an equation to find the value of the variable. Name any geometric property or conjecture that you used.

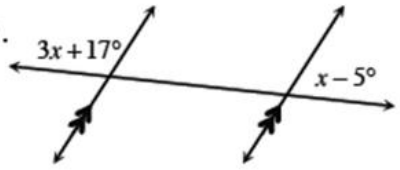
a.



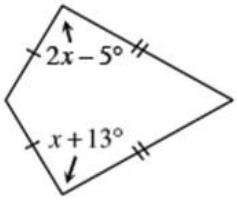
b. *PQRS* is a rhombus with perimeter = 28 units and *PR* = 8 units, find *b* (*QT*)



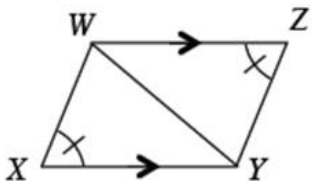
c.



d.



CL 7-155. Given the information in the diagram at right, use a flowchart to prove that $\Delta WXY \cong \Delta YZW$.



CL 7-156. MUST BE, COULD BE

Here are some more challenges from Mr. Quincey. For each description of a quadrilateral below, say what special type the quadrilateral *must be* and/or what special type the quadrilateral *could be*. Remember: Some descriptions may have no *must be* statements, and some descriptions may have many "*could be* statements!

a. The diagonals of my quadrilateral are equal.

The quadrilateral MUST BE a: _____

It COULD (even) BE a: _____

b. My quadrilateral has one right angle.

The quadrilateral MUST BE a: _____

It COULD (even) BE a: _____

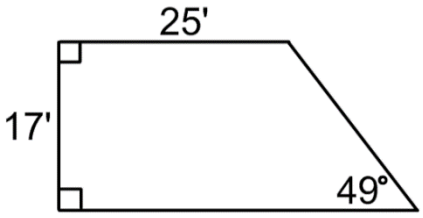
c. My quadrilateral has one pair of equal adjacent sides.

The quadrilateral MUST BE a: _____

It COULD (even) BE a: _____

Extra Closure problem… Be sure to show ALL of your work, neatly.

Find the area and the perimeter.



CL 7-157. The following questions are part of the grade for this packet – do not skip them! Take a few minutes to reflect on the closure packet, as well as the work you have done in this chapter. Be complete and specific in your answers. If there are things that you need help with, be sure to **SEE YOUR TEACHER OR GO TO MATH HELP BEFORE THE DAY OF THE TEST!**

Which problems in the closure packet do you feel confident about?

Which problems were difficult?

Make a list of topics from the chapter you feel you need help with.

Make a list of topics from the chapter that you feel you need to practice more.