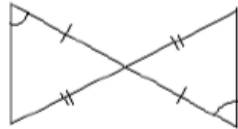


Name: _____ Class: _____ Date: _____

ID: B

Geometry Part I Midterm Make Up

1. Write the equation $3x - 3y = -12$ in slope-intercept form. Then graph the line.
2. Are the triangles congruent? Justify your answer.

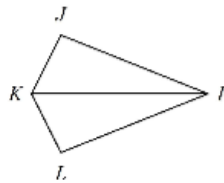


3. Write the converse of the statement. If the converse is true, write *true*; if not true, provide a counterexample.
If $x = 9$, then $x^2 = 81$.

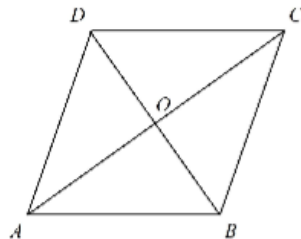
4. Explain how you can use SSS, SAS, ASA, or AAS with the definition of congruent triangles to complete a proof.

Given: $\overline{KJ} \cong \overline{KL}$, $\angle JKI \cong \angle LKI$

Prove: $\overline{JI} \cong \overline{LI}$



5. Complete this statement: For parallelogram $ABCD$, $\overline{BO} \cong$ _____.
Then state a definition or theorem that justifies your answer.



6. On a number line, P has coordinate -30 and Q has coordinate 38 . Find PQ .

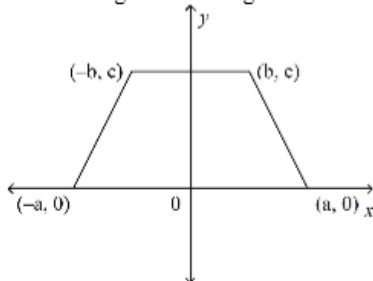
Name: _____

ID: B

7. For the given statements below, write the first statement as a conditional in if-then form. Then, if possible, use the Law of Detachment to draw a conclusion from the two given statements. If not possible, write *not possible*. Explain.

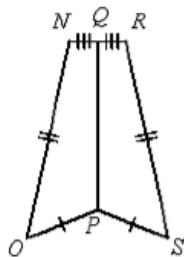
An acute angle has a measure greater than 0 and less than 90.
 $\angle X$ is an acute angle.

8. Find the lengths of the diagonals of this trapezoid.

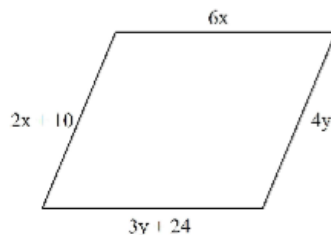


9. For the two quadrilaterals below, $\angle N \cong \angle R$, $\angle NQP \cong \angle RQP$, $\angle QPO \cong \angle QPS$, and $\angle O \cong \angle S$. Complete this congruence statement for the two quadrilaterals.

$OPQN \cong \underline{\hspace{1cm}}$



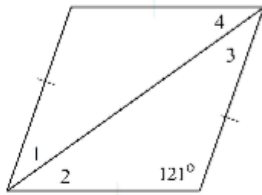
10. For what values of x and y must this quadrilateral be a parallelogram? Find the lengths of the sides. The diagram is not to scale.



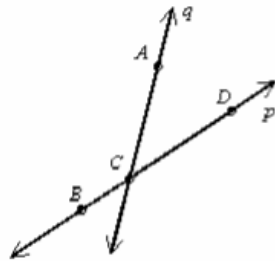
Name: _____

ID: B

11. Isosceles trapezoid $ABCD$ has legs $\overline{AB}$ and $\overline{CD}$, and base $\overline{BC}$. If $AB = 5y - 3$, $BC = 3y - 3$, and $CD = 6y - 17$, find the value of y .
12. Find the measures of an interior angle and an exterior angle of a regular polygon with 10 sides.
13. What type of quadrilateral has all sides congruent?
14. Give the name that best describes the parallelogram and find the measures of the numbered angles. The diagram is not to scale.



15. What are three other names for line p ?

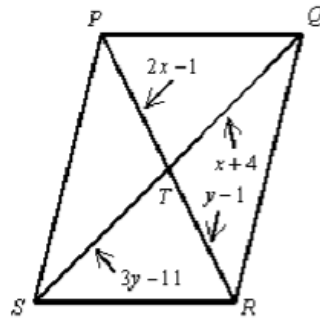


16. Describe a real-life example of two planes and their intersection.

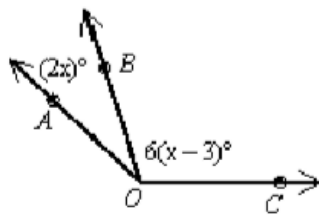
Name: _____

ID: B

17. For parallelogram $PQRS$, find the values of x and y . Then find PT , TR , ST , and TQ . The diagram is not to scale.



18. What is the value of x ? Identify the missing justifications.



Drawing not to scale

$$m\angle AOC = 160$$

$$m\angle AOB + m\angle BOC = m\angle AOC \quad \text{a. } \underline{\hspace{2cm}}$$

$$2x + 5(x - 3) = 160 \quad \text{b. } \underline{\hspace{2cm}}$$

$$2x + 5x - 15 = 160 \quad \text{c. } \underline{\hspace{2cm}}$$

$$7x - 15 = 160 \quad \text{d. } \underline{\hspace{2cm}}$$

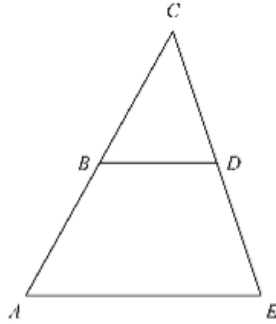
$$7x = 175 \quad \text{e. } \underline{\hspace{2cm}}$$

$$x = 25 \quad \text{f. } \underline{\hspace{2cm}}$$

Name: _____

ID: B

19. B is the midpoint of $\overline{AC}$ and D is the midpoint of $\overline{CE}$. Solve for x , given $BD = 4x + 2$ and $AE = 5x + 13$.



20. Find the measure of each interior and exterior angle. The diagram is not to scale.

