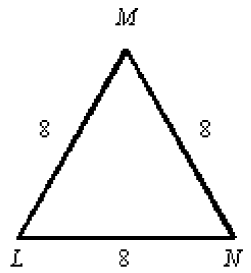
Name: _____ **Class:** _____ **Date:** _____ **ID: A**

Geom Chapter 4 Review Formative (Busch)

1. Classify ΔLMN.

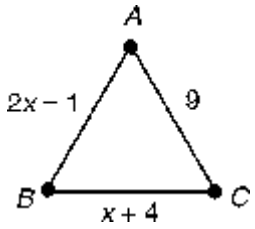


   a. Scalene
   b. Equilateral
   c. none of these
   d. Isosceles

2. A triangle has angle measures of 60°, 60°, and 60°. Choose the term that describes the triangle.
   a. Equiangular
   b. Right
   c. Obtuse
   d. Scalene

3. Complete the statement using one of the following words: always, sometimes, or never. "An isosceles triangle is _____ an obtuse triangle."

4. Solve for x, given that $\overline{AB} \cong \overline{BC}$. Is ΔABC equilateral?

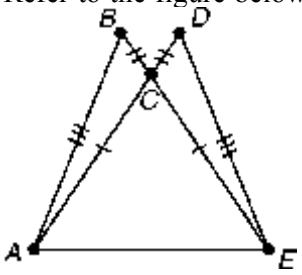


5. If $\Delta RPQ \cong \Delta JKL$, then $\overline{LJ} \cong$ ___ .

6. Given: $\Delta LMN \cong \Delta UVW$. Complete the statements.

   A. $\overline{UW} \cong$ ___
   B. $\angle LMN \cong$

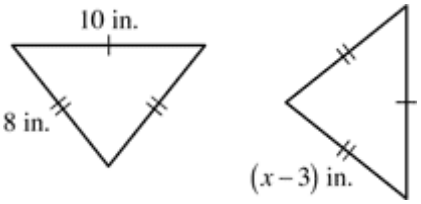
7. Refer to the figure below. $\Delta ABC \cong$ _____.



   a. ΔCDE
   b. ΔEDA
   c. ΔACE
   d. ΔEDC

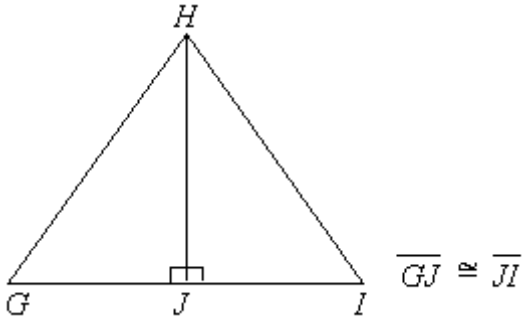
   Explain how you know the triangles are congruent. Then write an equation and solve for *x*.

8.



   a. Side-Angle-Side; $x - 3 = 8, 5$
   b. Side-Side-Side; $x - 3 = 8, 11$
   c. Side-Angle-Side; $x - 3 = 8, 11$
   d. Side-Side-Side; $x - 3 = 8, 5$

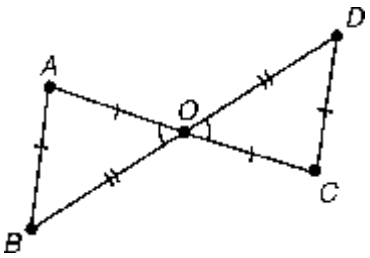
9. Refer to the figure below. Which of the following statements is true?



$\overline{GJ} \cong \overline{JI}$

a. $\Delta GHJ \cong \Delta IHJ$ by SAS
b. There are no congruent triangles.
c. $\Delta GJH \cong \Delta IJH$ by SSS
d. $\Delta GIJ \cong \Delta JHG$ by SSS

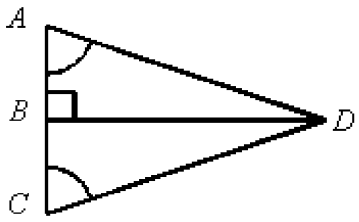
10. State two postulates or theorems that can be used to conclude that $\Delta AOB \cong \Delta COD$.



11. Given: $\angle B \cong \angle E$ and $\angle C \cong \angle F$. What other piece of information is needed to show $\Delta ABC \cong \Delta DEF$ by ASA Congruence Postulate?

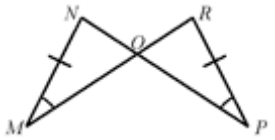
a. $\overline{EF} \cong \overline{FE}$
b. $\overline{BC} \cong \overline{EF}$
c. $\angle A \cong \angle D$
d. $\angle B = \angle F$

12. $\Delta ABD \cong \Delta CBD$. Name the theorem or postulate that justifies the congruence.



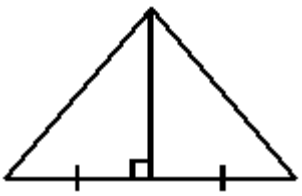
a. ASA
b. AAS
c. SAS
d. HL

13. Identify the congruent triangles. How do you know they are congruent?



Would HL, ASA, SAS, AAS, or SSS be used to justify that the pair of triangles is congruent?

14.



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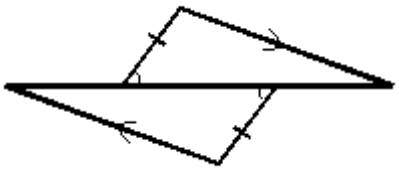
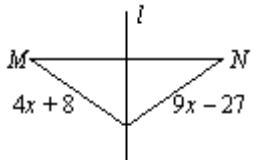
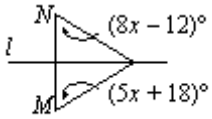


Line *l* is the perpendicular bisector of $\overline{MN}$.

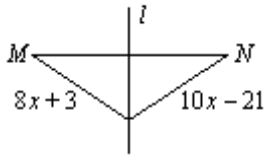
16. Find the value of x.



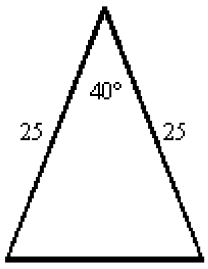
17. Find $m\angle M$.



18. Find the value of x.



19. What is the measure of each base angle of an isosceles triangle if its vertex angle measures 40 degrees and its 2 congruent sides measure 25 units?



a. 50°
b. 40°
c. 140°
d. 70°

20. In ΔABC, $AB = 3x - 2$, $BC = x + 4$, and $AC = 7$. Also $\overline{AB} \cong \overline{BC}$. Which term does NOT describe ΔABC?

a. Equilateral
b. Acute
c. Isosceles
d. Obtuse

21. In ΔABC, if $\overline{AB} \cong \overline{BC}$ and $m\angle A = 39°$, then $m\angle C =$ _____.

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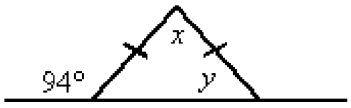
22. Find the values of x and y.



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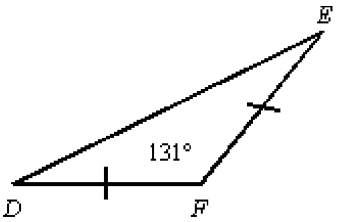
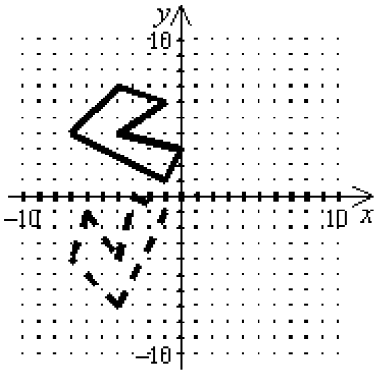
23. Use information in the figure below to find $m\angle D$.



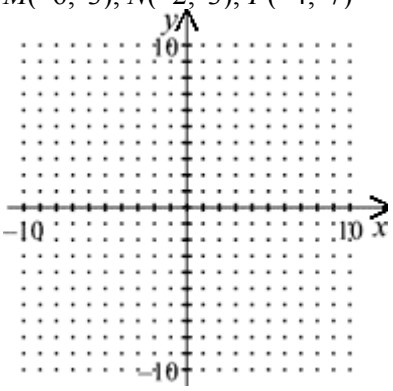
24. In ΔABC, $AC = BC$. The length of $\overline{AC}$ is four times the length of $\overline{AB}$. Find the lengths of all three sides of the triangle if the perimeter of the triangle is 63 inches.

25. The change in position from the solid figure to the dotted figure is best described as a _____ .



a. transmission
b. rotation
c. reflection
d. translation

26. Graph the triangle whose vertices have the coordinates given below. Then draw its reflection over the *x*-axis.
M(–6, 3), *N*(–2, 3), *P*(–4, 7)



27. A point *P* has coordinates (8, –3). What are its new coordinates after point *P* is reflected over the *x*-axis?

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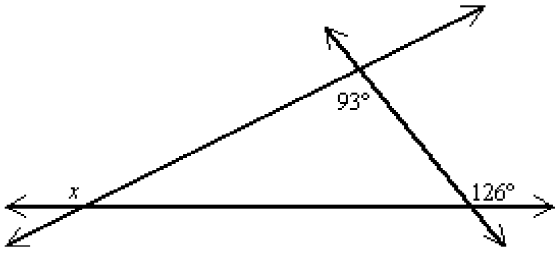
28. What is the translation image of $(7, 3)$ after the translation $(x, y) \rightarrow (x-2, y+4)$?

29. Find the value of *x*.



Describe the given translation using coordinate notation.

30. Every point moves to the right 3 units and up 4 units.

31. Every point moves to the left 2 units and down 1 unit.