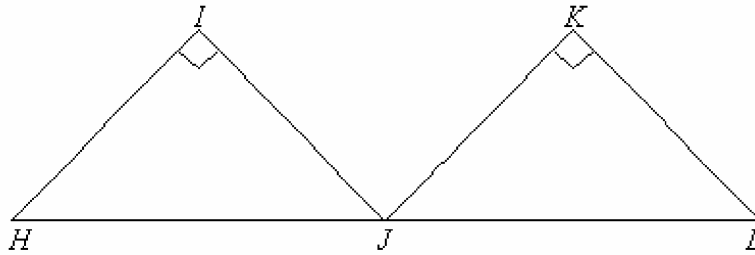


Geometry Mastery Test #4 Review

Multiple Choice

Identify the choice that best completes the statement or answers the question.

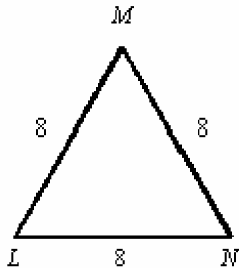
_____ 1. Refer to the figure shown. Which of the following statements is true?



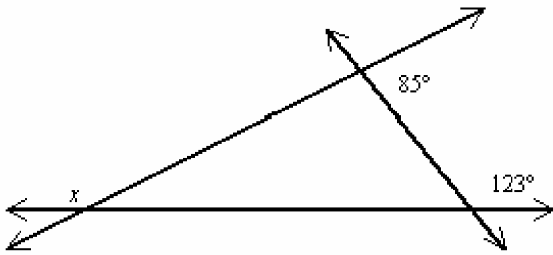
$$HI = JK \quad \overline{IJ} \cong \overline{LK}$$

- | | |
|--|---|
| a. $\triangle HIJ \cong \triangle JKL$ by SAS | c. $\triangle HIJ \cong \triangle KLJ$ by SAS |
| b. $\triangle HIJ \cong \triangle K LJ$ by SSS | d. $\triangle HIJ \cong \triangle LKJ$ by ASA |

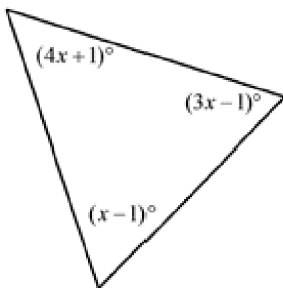
2. Classify $\triangle LMN$.



3. Find the value of x :

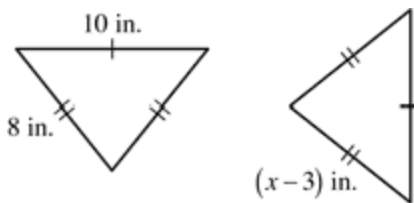


4. Find the measure of the interior angles to the nearest tenth. (Drawing is not to scale.)

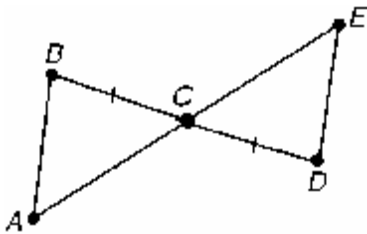


Explain how you know the triangles are congruent. Then write an equation and solve for x .

- 5.



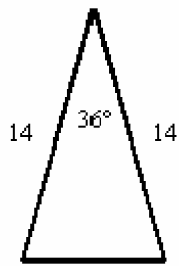
6. What must be true in order for $\triangle ABC \cong \triangle EDC$ by the SAS Congruence Postulate?



Name: _____

ID: A

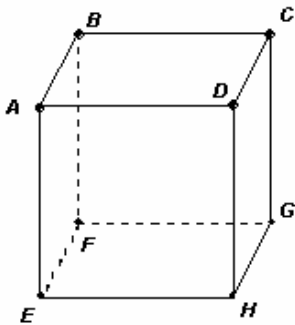
7. What is the measure of each base angle of an isosceles triangle if its vertex angle measures 36 degrees and its 2 congruent sides measure 14 units?



8. Find the values of x and y .



Use the figure below.

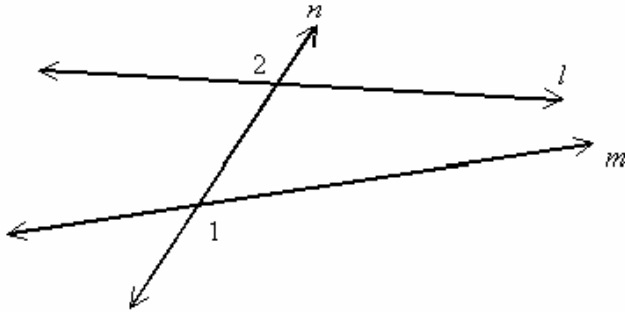


9. For the cube shown, \overleftrightarrow{AD} and \overleftrightarrow{HG} are _____.

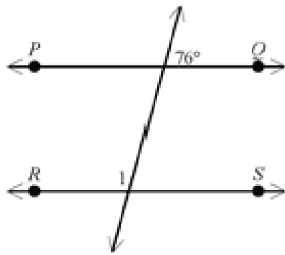
Name: _____

ID: A

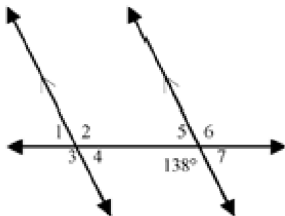
10. In the figure, $\angle 1$ and $\angle 2$ are _____.



11. Find $m\angle 1$ in the figure below. \overleftrightarrow{PQ} and \overleftrightarrow{RS} are parallel.



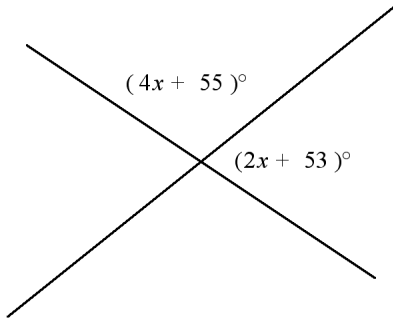
12. Use the figure to find the measure of $\angle 5$.



13. Write the equation of the line passing through the point $(8, -6)$ and parallel to the line $y = -9x - 4$.

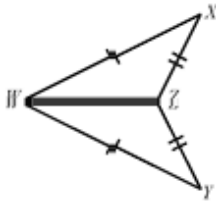
14. Find the distance between the points $(-3, -1)$ and $(5, 3)$.

15. Solve for x :

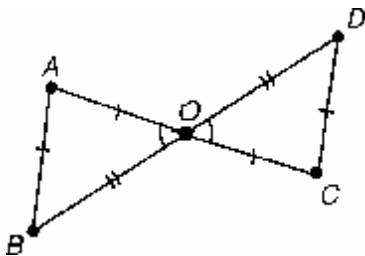


16. The midpoint of \overline{JK} is $M(4, -4)$. One endpoint is $J(3, -3)$. Find the coordinates of the other endpoint.
17. Find the slope of a line parallel to the line containing the points $(-5, 4)$ and $(-3, 2)$.

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

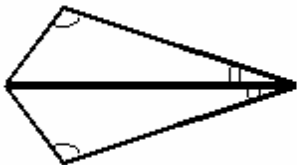


19. State two postulates or theorems that can be used to conclude that $\triangle AOB \cong \triangle COD$.



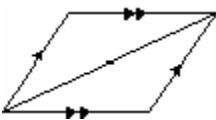
Would HL, ASA, SAS, AAS, or SSS be used to justify that the pair of triangles is congruent?

20.



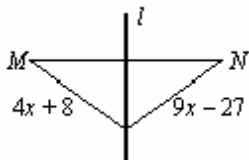
Tell which method(s) you can use to prove that the triangles are congruent. If no method can be used, write none.

21.

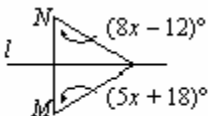


Line l is the perpendicular bisector of \overline{MN} .

22. Find the value of x .



23. Find $m\angle M$.



Other

24. Identify the hypothesis and conclusion of the statement.
If today is Wednesday, then tomorrow is Thursday.

**Geometry Mastery Test #4 Review
Answer Section****MULTIPLE CHOICE**

1. A

SHORT ANSWER

2. Equilateral
3. 152°
4. $91.5^\circ, 21.6^\circ, 66.9^\circ$
5. Side-Side-Side; $x - 3 = 8, 11$
6. $\overline{AC} \cong \overline{CE}$
7. 72°
8. $x = 16^\circ, y = 82^\circ$
9. skew lines
10. alternate exterior angles
11. 104°
12. 42°
13. $y = -9x + 66$
14. $4\sqrt{5}$
15. $x = 12$
16. $(5, -5)$
17. -1
18. $\triangle WXZ \cong \triangle WYZ$; SSS
19. SAS and SSS Congruence Postulates
20. AAS
21. ASA
22. 7
23. 68°

OTHER

24. hypothesis: today is Wednesday, conclusion: tomorrow is Thursday