Name_____ Date _____ Pd_____

6.1 - 6.5 TEST Review

☑ *Use when you get it right all by yourself*

S *Use when you did it all by yourself, but made a silly mistake*

H *Use when you could do it alone with a little help from teacher or peer*

G *Use when you completed the problem in a group*

X *Use when a question was attempted but wrong (get help)*

N *Use when a question was not even attempted*

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Special Segments	1, 2 - 5	14 - 16	25 - 30
Slope	1b		
Point-Slope Form	1c		
Perpendicular Slope	1d		
Point of Concurrency	2 - 5		
Angle & Side Restrictions		6 – 9	32 – 34
Solving Inequalities		6 - 9	32 – 34
Simplifying Radicals	10		
Isosceles Triangles		6 - 9	32 – 34
Parallel Lines: AIA Thm		13	34
Midsegment & Midsegment Triangle	17 - 24		
Counterexamples			25 - 30
Midpoint Formula	1a		
Triangle Sides/Angles shortest to longest	11, 17 - 24	12, 14 – 16, 31	13
Distance Formula	31		
Classifying Triangles	31		

1. In ΔABC, $\overline{AD}$ **is a median,** and $A(-2,2)$, $B(2,6)$, and $C(6,-4)$.

A. _____ What is the coordinate of point D?

B. _____ What is the slope of $\overline{AD}$?

C. _____ Find the equation in point slope form of $\overline{AD}$.

D. _____ Find the slope of the altitude from vertex C.

Match:

2 . _____	Circumcenter	A	Altitude
3. _____	Centroid	B	Angle Bisector
4. _____	Orthocenter	C	Median
5. _____	Incenter	D	Perpendicular Bisector

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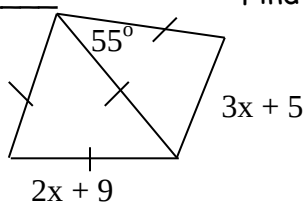
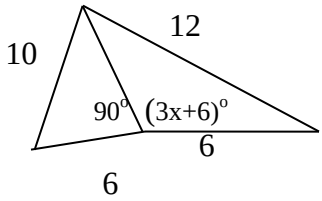
6.1 - 6.5 TEST Review

Solve:

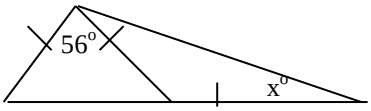
6._____ Find restrictions on x.



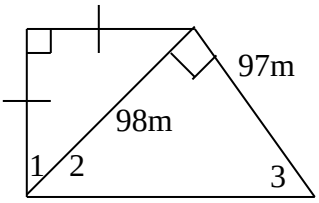
7. _____Find the restrictions on x



8. Find x_____



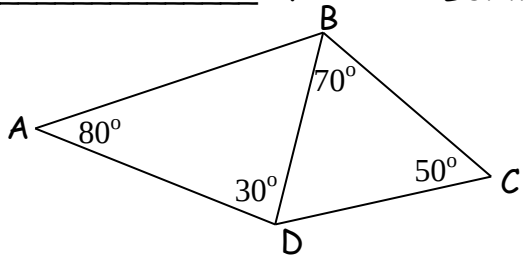
9._____ Use triangle inequalities to compare ∠1, ∠2 and ∠3.



10. _____ , _____Can you make a triangle out of lengths 8√6, 5√15, and 7√3? Why?

_____11. In ΔABC m∠A = $(3x)^o$, m∠ B = (x + 12)° and m ∠ C = (x + 3)°.
List the **sides** of the triangle from longest to shortest.

_____12. List the sides of the whole figure from shortest to longest.

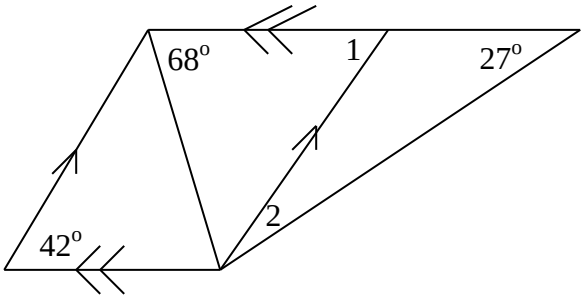


Name_____ Date _____ Pd_____

6.1 - 6.5 TEST Review

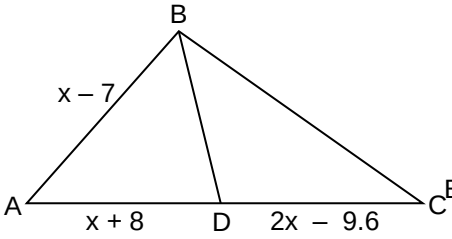
13. m∠1 =_____

m∠2 =_____



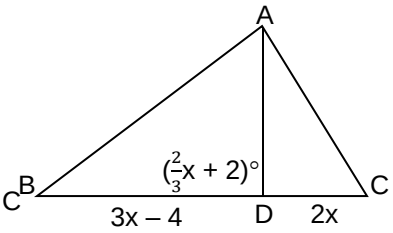
14. Find AB if $\overline{BD}$ is a median of △ABC.

_____



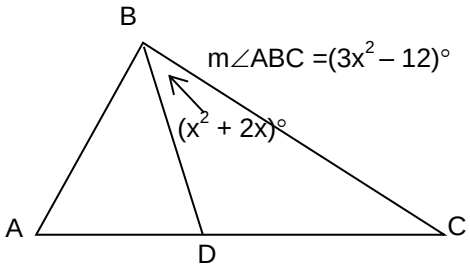
15. Find BC if $\overline{AD}$ is an altitude of △ABC.

_____



16. Find m∠ABC if $\overline{BD}$ is an angle bisector of △ABC.

_____



17 – 24: Use the diagram to the right to find the required values.

$LO = 6x + 4$, $LM = 4x$, $MP = 3x$, and $NO = 42$ m ∠ LPM = 52° m ∠ L = 44°

17. x = _____

18. LN = _____

19. MP = _____

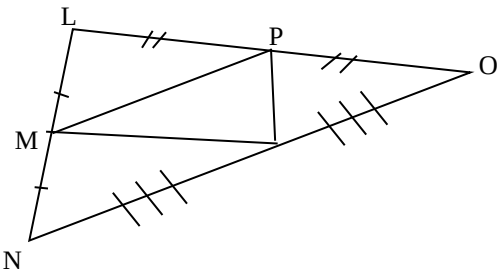
20. m∠O =_____

21. m∠N =_____

22. LO =_____

23. LP =_____

24.m∠LMP =_____



Sometimes, Always or Never: Prove an Always, counterexample for Never, and both for Sometimes. Words or pictures are acceptable.

_____25. A right triangle is isosceles.

_____26. An isosceles triangle is equilateral.

_____27. In an obtuse triangle the circumcenter is outside the triangle.

_____28. In an equiangular triangle the centroid is equidistant from the sides.

_____29. An acute triangle is isosceles.

_____30. The incenter is the center of gravity.

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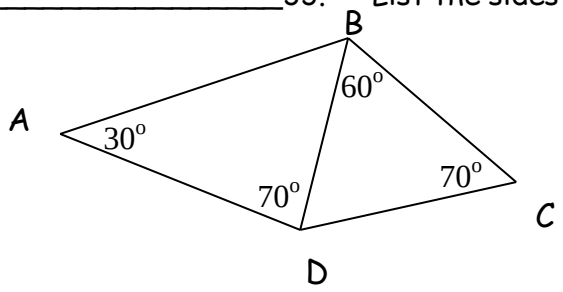
6.1 - 6.5 TEST Review

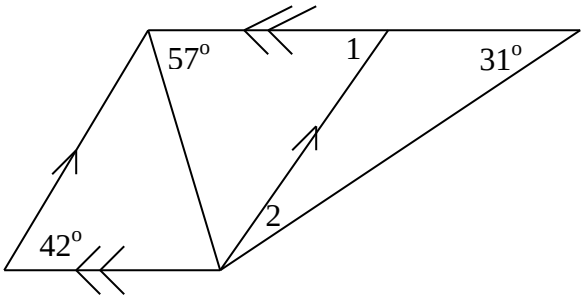
_____31. Classify the triangle with coordinates A(4, -2) B(-6, 1) and C(14, 1) as scalene, isosceles, or equilateral. What is the largest angle of the triangle? (show calculations)

_____32. In ΔABC $m\angle A = 49°$, $m\angle B = 21°$ and $m\angle C = 110°$. List the sides of the triangle from longest to shortest.

_____33. List the sides for the whole figure from shortest to longest.



34. m ∠ 1 =_____
m ∠ 2 =_____



Chapter 6 Test Study Guide:

1) Triangle Inequality Theorem
2) Midsegment Triangle Theorem
3) Triangle Inequality Theorem
4) Special Segments & their special properties
5) Special Segments & their special properties
6) Triangle Inequality Theorem
7) A) Distance formula & Triangle Inequality Theorem
   B) Midpoint formula & Special Segments
   C) Perpendicular slope & Special Segments
8) Special Segments
9) Special Segments & POC's
10) POC's
11) POC's
12) POC's
13) POC's
14) POC's
15) Straw Activity: What makes a triangle work?
16) Straw Activity: What makes a triangle work?
17) Special Segments
18) Special Segments
19) Special Segments
20) Special Segments
21) Special Segment Constructions & POC (watch videos on the website!)