carlys

ExamView - advanced chapter 5 test.tst
05/15/15 10:53 AM

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

Advanced Geometry, Chapter 5 Test

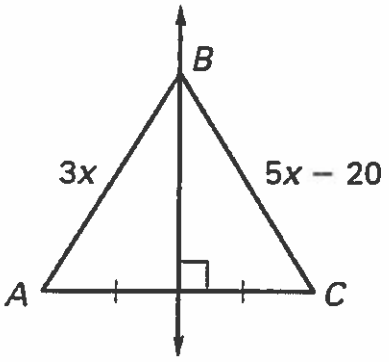
Completion

Complete each statement.

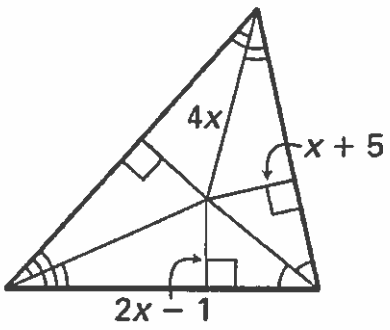
1. The angle bisectors of a triangle are concurrent at a point called the _____.

Short Answer

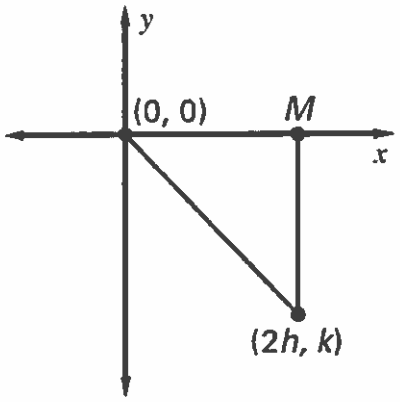
2. Find the value of x.



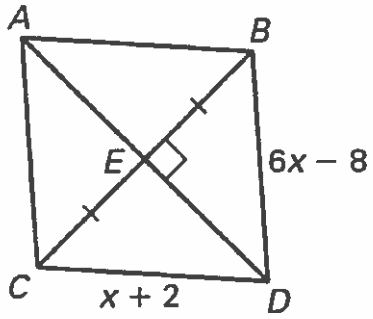
3. Find the value of x.



4. Find the coordinates of point M in the figure.

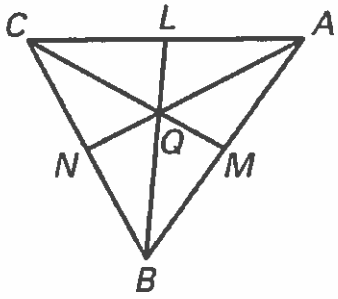


5. Find the value of x.

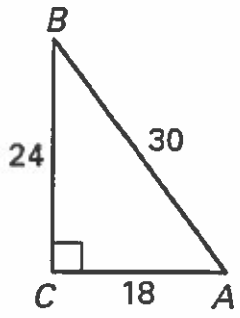


6. In ΔABC, Q is the centroid.

   $QC = 12$. Find CM.



7. List the angles and sides in order from smallest to largest.

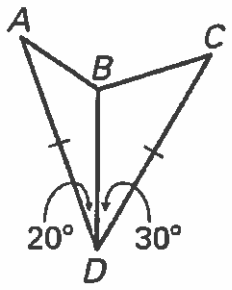


8. Is it possible to construct a triangle with the given side lengths?

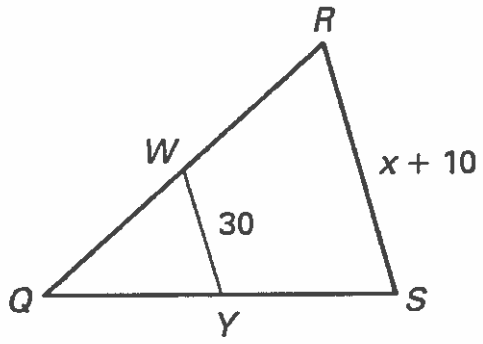
   4, 6, 10

9. Complete with <, >, or =.

   AB __?__ BC

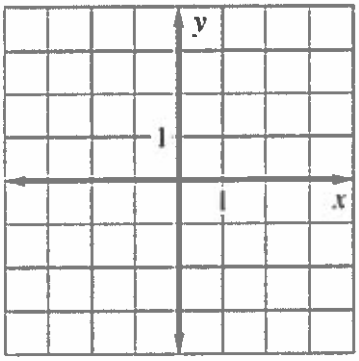


10. $\overline{WY}$ is the midsegment of ΔQRS. Find the value of x.



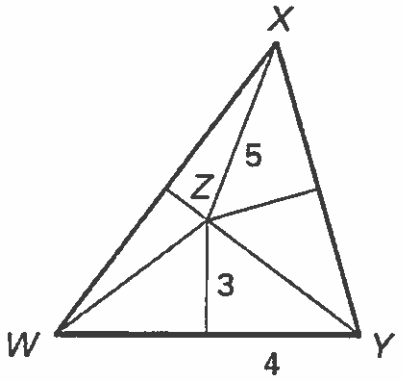
11. Place the figure in a coordinate plane in a convenient way. Give the coordinates of each vertex.

Isosceles right triangle:
Leg length is 3.



12. In the diagram, the perpendicular bisectors if ΔWXY meet at point Z. Find the indicated measure.

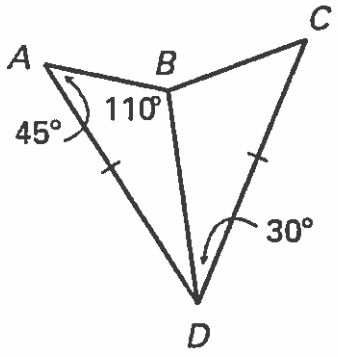
WZ



13. A triangle has one side of length 10 and another of length 6. Describe the possible lengths of the third side.

14. Complete with <, >, or =.

AB ___?___ *BC*

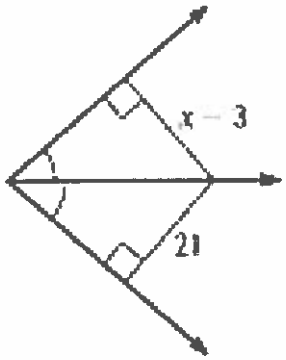


15. The perpendicular bisectors of a triangle all pass through what point?

Name: _____ ID: A

Find the value of x.

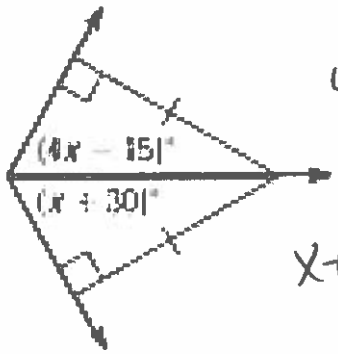
16.



X-3

21

17.

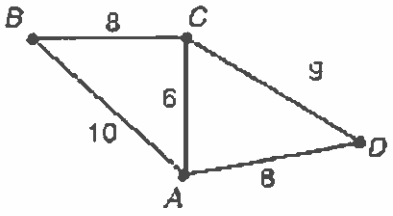


4X-15

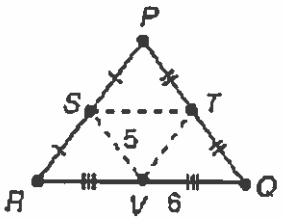
X+30

18. The altitudes of a triangle are concurrent. What is the name of their common point?

19. Refer to the figure. What is the largest angle that is part of a triangle, in the figure?

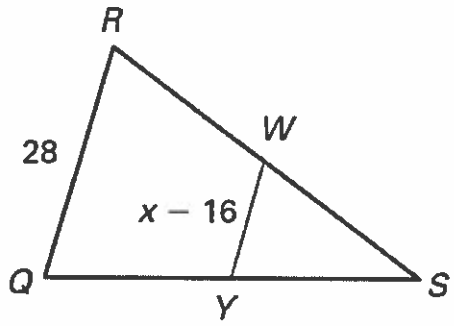


20. For the triangle shown, $VS = 5$ and $VQ = 6$. Then $PQ =$ _____.



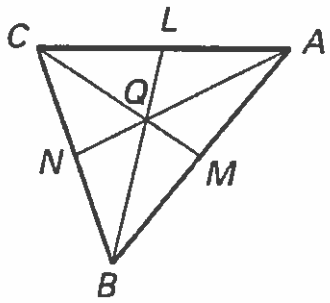
21. In a triangle, a segment connecting the midpoints of two sides of the triangle is called a _____.

22. $\overline{WY}$ is the midsegment of ΔQRS. Find the value of x.

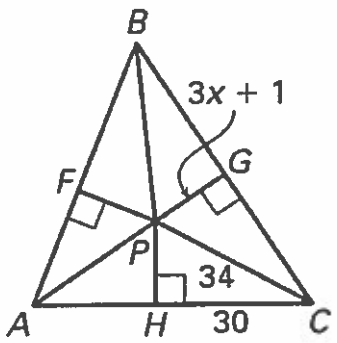


23. In ΔABC, Q is the centroid. Find the indicated length.

$QC = 12$. Find QM.

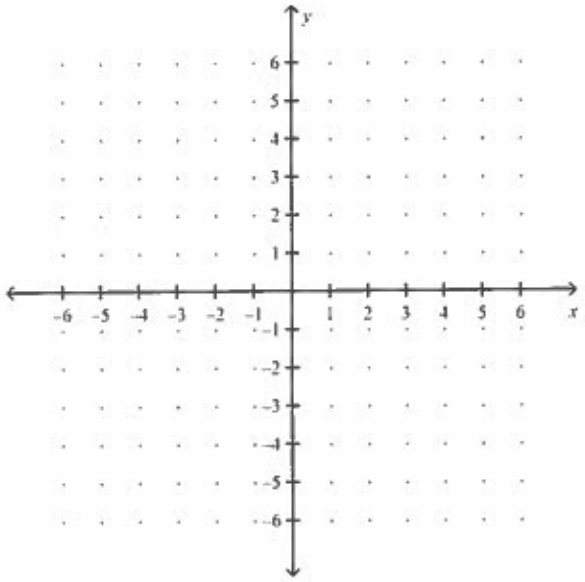


24. (BONUS) Find the value of x that makes P the incenter of the triangle.

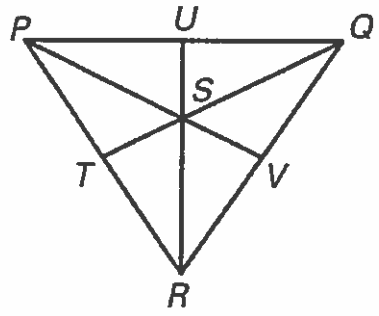


25. Find the coordinates of the centroid P of ΔSTU.

$S(2,5), T(5,-2), U(-1,-6)$

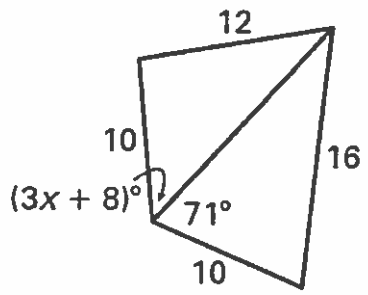


26. Point S is the centroid of $\triangle PQR$. Use the given information to find the value of x.

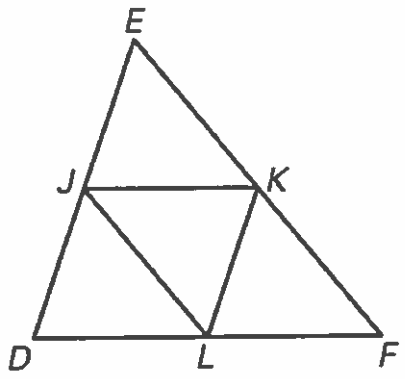


$RS = 4x + 1$ and $SU = 3x - 4$

27. Use the Hinge Theorem or its converse and properties of triangles to write and solve an inequality to describe a restriction on the value of x.

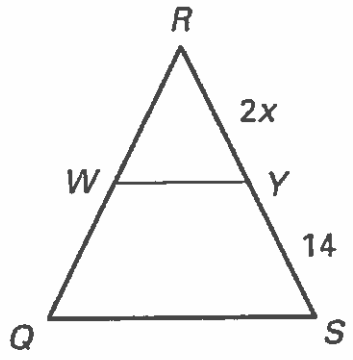


28. Use $\triangle DEF$, where J, K, and L are midpoints of the sides.



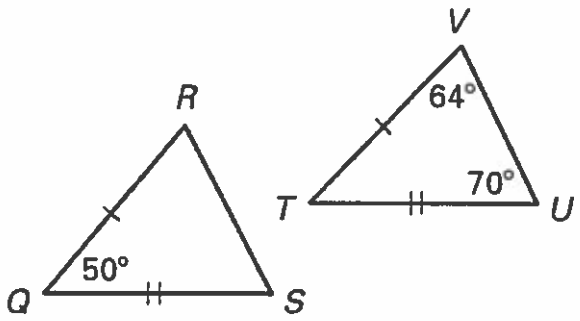
If $DF = 18x - 6$ and $JK = 3x + 11$, what is JK?

29. $\overline{WY}$ is the midsegment of $\triangle QRS$. Find the value of x.



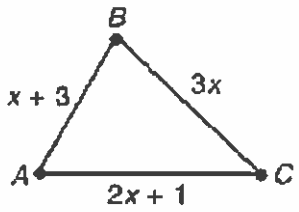
30. Complete with <, >, or =.

RS __?__ VU



Other

31. Using the Triangle Inequality Theorem, solve for all possible values of x.

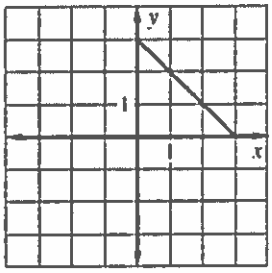


Advanced Geometry, Chapter 5 Test
Answer Section

COMPLETION

1. Incenter

SHORT ANSWER

2. 10; Perpendicular Bisector Theorem
3. 6
4. $(2h, 0)$
5. 2
6. 18
7. $\angle B, \angle A, \angle C$
8. no
9. <
10. 50
11. 

    (0, 0), (0, 3), (3, 0)
12. 5
13. $4 < x < 16$
14. <
15. Circumcenter
16. 24
17. 15
18. Orthocenter
19. $\angle BCA$
20. 10
21. midsegment
22. 30
23. 6
24. $x = 5$
25. $(2, -1)$
26. $x = \frac{9}{2}$

27. $x < 21$
28. 18
29. 7
30. >

OTHER

31. $x > \frac{1}{2}$