6.2 Puzzle Time

What Did The Computer Do At Lunchtime? It . . .

Write the letter of each answer in the box containing the exercise number.

Complete the sentence.

1. When three or more lines, rays, or segments intersect in the same point, they are called _____ lines, rays, or segments.

2. The circumcenter of a triangle is _____ from the vertices of the triangle.

3. The angle _____ of a triangle are concurrent.

4. The _____ of the triangle is the point of intersection of angle bisectors.

5. The incenter of a triangle always lies _____ the triangle.

Find the indicated measure using the diagram. The perpendicular bisectors are at points *D*, *E*, and *F*. Angle bisectors are at *A*, *B*, and *C*.
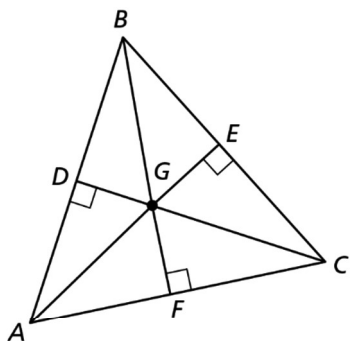
6. $AG = 13$, $BD = 5$; Find GD.

7. $GF = 8$, $GC = 17$; Find AF.

8. G is the incenter, $GD = 4x - 1$, and $GE = 3x + 5$; Find GF.

Answers
H. 12
U. circumcenter
D. inside
T. equiangular
N. measurements
A. concurrent
M. 5
R. outside
E. 15
Y. 23
E. 6
B. bisectors
O. congruent
S. 18
T. equidistant
A. incenter

6	1	5		4		3	8	2	7

Name _____ Date _____

6.3 Puzzle Time

## What Did The Librarian Use For Bait When She Went Fishing?

Circle the letter of each correct answer in the boxes below. The circled letters will spell out the answer to the riddle.

Complete the sentence.

1. A(n) _____ of a triangle is a segment from a vertex to the midpoint of the opposite side.

2. The lines containing the medians of a triangle are concurrent. The point of concurrency, called the _____, is inside the triangle.

3. The centroid of a triangle is two-thirds of the distance from each vertex to the _____ of the opposite side.

4. A(n) _____ of a triangle is the perpendicular segment from a vertex to the opposite side or to the line that contains the opposite side.

5. The lines containing the altitudes of a triangle are concurrent. This point of concurrency is the _____ of the triangle.

Find the indicated measurement using the diagram as a reference. Point G is the centroid.

6. $FC = 36$; Find GC.

7. $FC = 36$; Find FG.

8. $GF = 9$; Find FC.

9. $GF = 9$; Find GC.
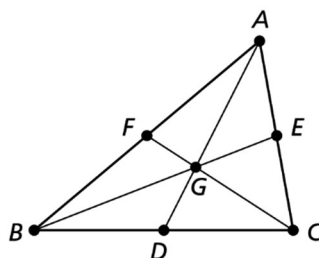
Z	A	R	U	L	B	I	M	O	O
9	27	15	point	congruent	18	straight	3	12	orthocenter
K	G	E	F	W	O	I	S	R	M
centroid	21	center	1	24	median	bisector	0	altitude	midpoint