

6.1 Puzzle Time

Why Did The Elephant Jump Up And Down? Because He . . .

A	B	C	D	E	F
G	H				

Complete each exercise. Find the answer in the answer column. Write the word under the answer in the box containing the exercise letter.

construction MOUSE
6 SHAKE
angle MEDICINE
correct AND
$y = \frac{1}{7}x + \frac{64}{7}$ TO
endpoints AND
4 RAN
$y = -7x + 52$ TAIL

Complete the sentence.

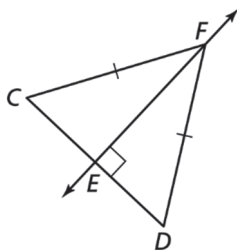
- A. The perpendicular _____ of a line segment is the line that is perpendicular to the segment at its midpoint.
- B. A point is _____ from two figures when the point is the same distance from each figure.
- C. If a point is on the bisector of an angle, then it is equidistant from the two sides of the _____.
- D. In a plane, if a point is on the perpendicular bisector of a segment, then it is equidistant from the _____ of the segment.

Write an equation of the perpendicular bisector of the segment with the given endpoints.

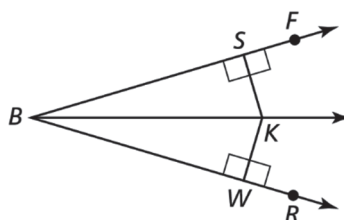
- E. $A(-2, 8), B(4, -6)$
- F. $X(5, 17), Y(7, 3)$

Find the value of the indicated variable.

- G. $CE = 3x + 5, DE = 2x + 11$; Find x .



- H. $m\angle SBK = (4y - 3)^\circ$,
 $m\angle KBW = (2y + 15)^\circ$,
 $\overline{SK} \cong \overline{WK}$. Find y .



vertex THE
$y = -\frac{7}{3}x + \frac{10}{3}$ FOOT
bisector TOOK
-3 OF
equidistant HIS
9 IT
line RED
$y = \frac{3}{7}x + \frac{4}{7}$ FORGOT

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.

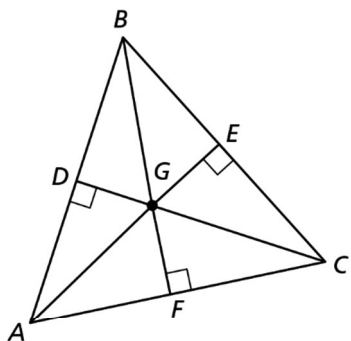
Complete the sentence.

- When three or more lines, rays, or segments intersect in the same point, they are called _____ lines, rays, or segments.
- The circumcenter of a triangle is _____ from the vertices of the triangle.
- The angle _____ of a triangle are concurrent.
- The _____ of the triangle is the point of intersection of angle bisectors.
- The incenter of a triangle always lies _____ the triangle.

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

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*.



- $AG = 13, BD = 5$; Find GD .
- $GF = 8, GC = 17$; Find AF .
- G is the incenter, $GD = 4x - 1$, and $GE = 3x + 5$; Find GF .

6	1	5		4		3	8	2	7
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