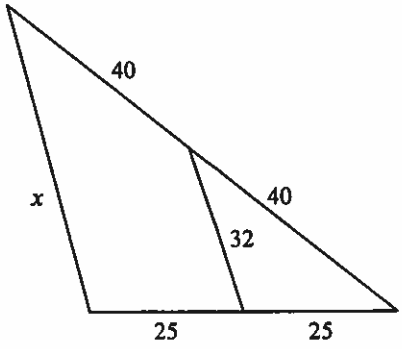
Name: _____ Class: _____ Date: _____ ID: A

Geometry Chapter 05 Instant Chapter Test

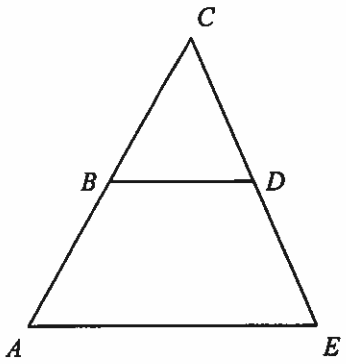
Multiple Choice
Identify the letter of the choice that best completes the statement or answers the question.

____ 1. Find the value of x. The diagram is not to scale.



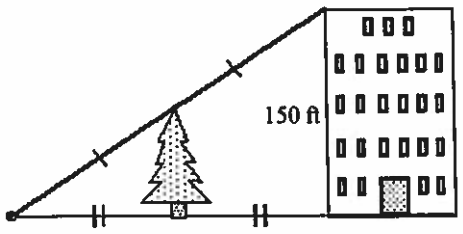
a. 32 b. 50 c. 64 d. 80

____ 2. B is the midpoint of $\overline{AC}$, D is the midpoint of $\overline{CE}$, and $AE = 21$. Find BD. The diagram is not to scale.



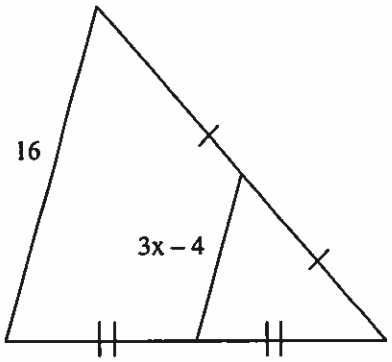
a. 42 b. 21 c. 11.5 d. 10.5

____ 3. Use the information in the diagram to determine the height of the tree. The diagram is not to scale.



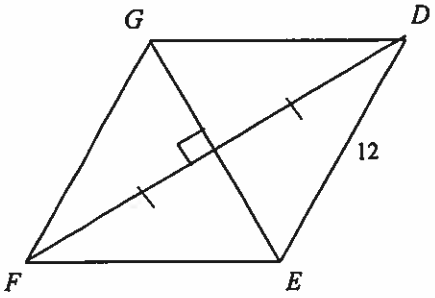
a. 75 ft b. 150 ft c. 35.5 ft d. 37.5 ft

____ 4. Find the value of x.



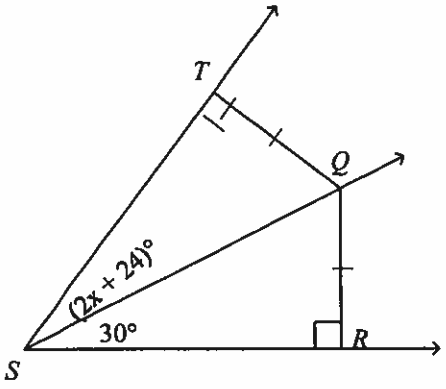
a. 4 b. 8 c. $6.\overline{6}$ d. 6

____ 5. The length of $\overline{DE}$ is shown. What other length can you determine for this diagram?



a. $EF = 12$
b. $DG = 12$
c. $DF = 24$
d. No other length can be determined.

____ 6. Q is equidistant from the sides of $\angle TSR$. Find the value of x. The diagram is not to scale.



a. 27 b. 3 c. 15 d. 30

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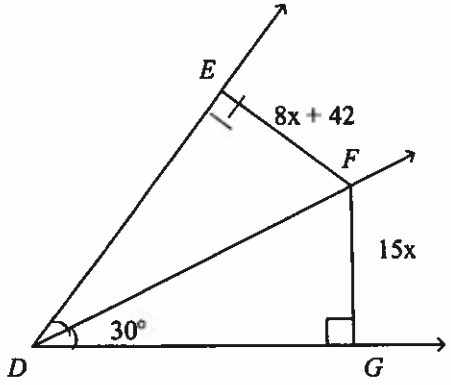
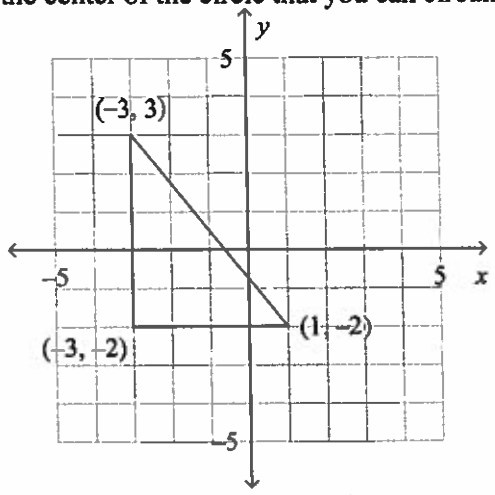
____ 7. $\overline{DF}$ bisects $\angle EDG$. Find the value of x. The diagram is not to scale.



a. $\frac{23}{42}$ b. 90 c. 30 d. 6

____ 8. Find the center of the circle that you can circumscribe about the triangle.

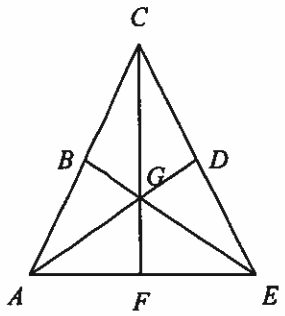


a. $(\frac{1}{2}, -1)$ b. $(-1, \frac{1}{2})$ c. $(-3, \frac{1}{2})$ d. $(-1, -2)$

____ 9. Find the center of the circle that you can circumscribe about ΔEFG with $E(4, 4)$, $F(4, 2)$, and $G(8, 2)$.

a. (6, 3) b. (4, 2) c. (4, 4) d. (3, 6)

____ 10. In ΔABC, G is the centroid and $BE = 9$. Find BG and GE.



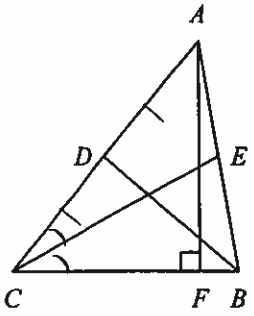
a. $BG = 2\frac{1}{4}, GE = 6\frac{3}{4}$

b. $BG = 3, GE = 6$

c. $BG = 6, GE = 3$

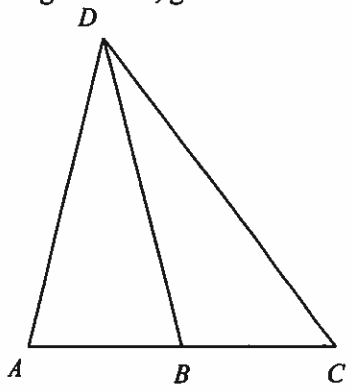
d. $BG = 4\frac{1}{2}, GE = 4\frac{1}{2}$

____ 11. Name a median for ΔABC.



a. $\overline{AD}$ b. $\overline{CE}$ c. $\overline{AF}$ d. $\overline{BD}$

____ 12. Find the length of $\overline{AB}$, given that $\overline{DB}$ is a median of the triangle and $AC = 26$.



a. 13

b. 26

c. 52

d. not enough information

____ 13. What is the negation of this statement?
Miguel's team won the game.

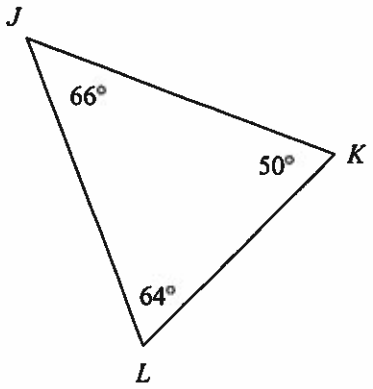
a. It was not Miguel's team that won the game.
b. Miguel's team lost the game.
c. Miguel's team did not win the game.
d. Miguel's team did not play the game.

____ 14. What is the inverse of this statement?
If he speaks Arabic, he can act as the interpreter.
a. If he does not speak Arabic, he can act as the interpreter.
b. If he speaks Arabic, he can't act as the interpreter.
c. If he can act as the interpreter, then he does not speak Arabic.
d. If he does not speak Arabic, he can't act as the interpreter.

____ 15. Which two statements contradict each other?
I. $\overline{PQ}$ lies on plane PQR.
II. Point S lies on plane PQR.
III. $\overline{QS}$ does not lie on plane PQR.
a. I and II
b. I and III
c. II and III
d. No two of the statements contradict each other.

____ 16. Three security cameras were mounted at the corners of a triangular parking lot. Camera 1 was 158 ft from camera 2, which was 121 ft from Camera 3. Cameras 1 and 3 were 140 ft apart. Which camera had to cover the greatest angle?
a. camera 2 b. camera 1 c. cannot tell d. camera 3

____ 17. List the sides in order from shortest to longest. The diagram is not to scale.

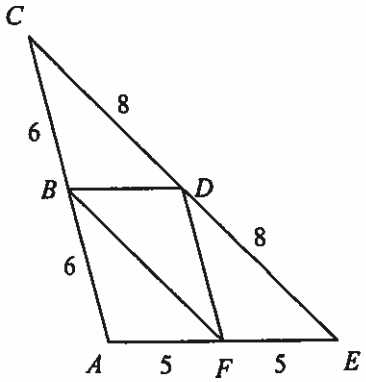


a. $\overline{LK}, \overline{LJ}, \overline{JK}$ b. $\overline{LJ}, \overline{LK}, \overline{JK}$ c. $\overline{LJ}, \overline{JK}, \overline{LK}$ d. $\overline{LK}, \overline{JK}, \overline{LJ}$

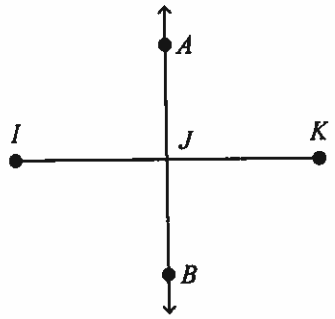
____ 18. Two sides of a triangle have lengths 10 and 18. Which inequalities describe the values that possible lengths for the third side?
a. $x \geq 8$ and $x \leq 28$
b. $x > 8$ and $x < 28$
c. $x > 10$ and $x < 18$
d. $x \geq 10$ and $x \leq 18$

Short Answer

19. Identify parallel segments in the diagram.



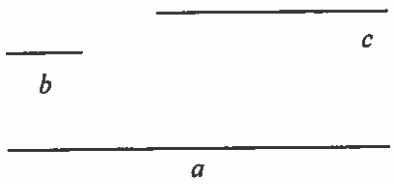
20. Given: $\overleftrightarrow{AB}$ is the perpendicular bisector of $\overline{IK}$. Name two lengths that are equal.



21. To prove "p is equal to q" using an indirect proof, what would your starting assumption be?

22. Given points $A(2, 3)$ and $B(-2, 5)$, explain how you could use the Distance Formula and an indirect argument to show that point $C(0, 3)$ is NOT the midpoint of $\overline{AB}$.

23. Can these three segments form the sides of a triangle? Explain.



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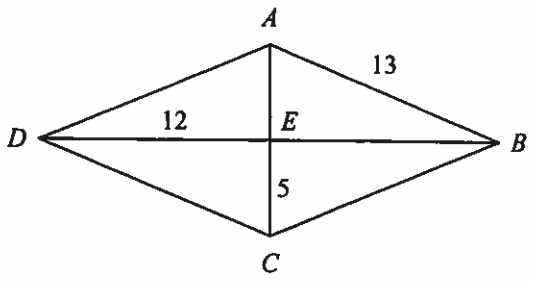
Essay

24. $\overline{AC}$ and $\overline{BD}$ are perpendicular bisectors of each other. Find BC, AE, DB, and DC. Justify your answers.



Reasoning and Writing in Math

25. Use indirect reasoning to explain why a quadrilateral can have no more than three obtuse angles.