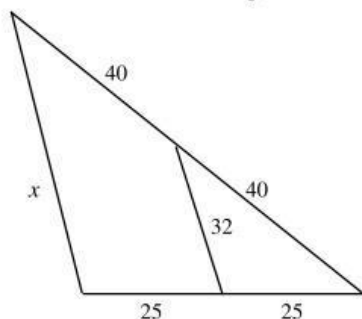


Geometry Final Exam Review

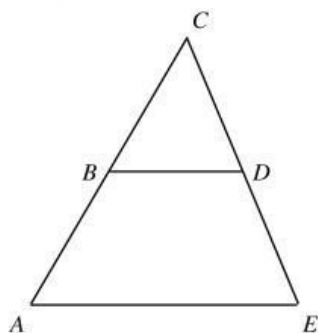
Multiple Choice

Identify the choice that best completes the statement or answers the question.

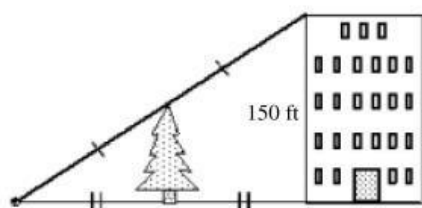
- ____ 1. Find the value of x . The diagram is not to scale.



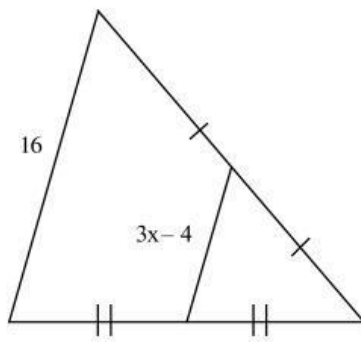
- a. 32 b. 50 c. 64 d. 80
- ____ 2. B is the midpoint of $\overline{AC}$, D is the midpoint of $\overline{CE}$, and $AE = 21$. Find BD . The diagram is not to scale.



- 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.

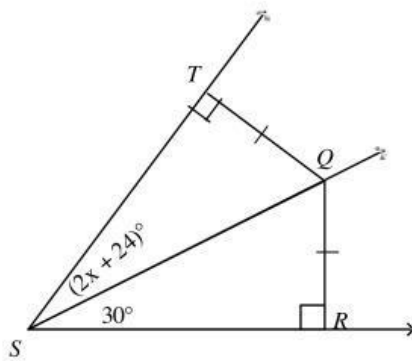


- a. 75 ft b. 150 ft c. 35.5 ft d. 37.5 ft
- ____ 4. Find the value of x .



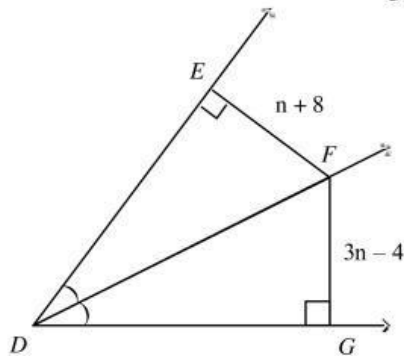
- a. 4 b. 8 c. 6.6 d. 6

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



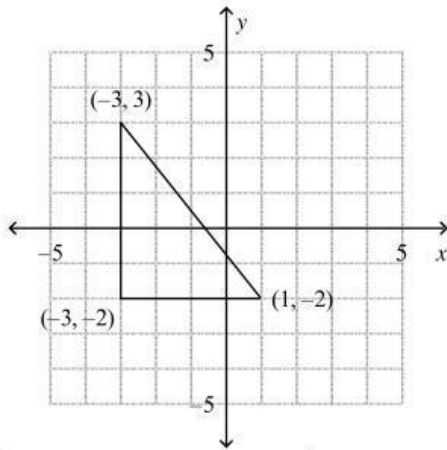
- a. 27 b. 3 c. 15 d. 30

6. $\overrightarrow{DF}$ bisects $\angle EDG$. Find FG . The diagram is not to scale.



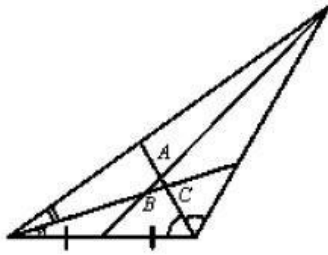
- a. 15 b. 14 c. 19 d. 28

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



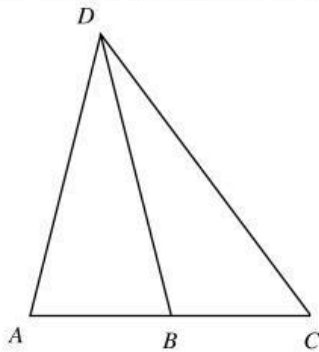
- a. $(\frac{1}{2}, -1)$ b. $(-1, \frac{1}{2})$ c. $(-3, \frac{1}{2})$ d. $(-1, -2)$

8. Name the point of concurrency of the angle bisectors.



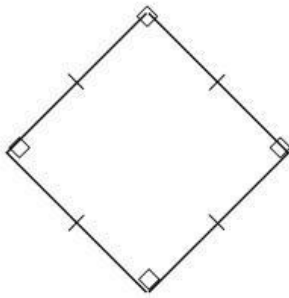
- a. A b. B c. C d. not shown

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



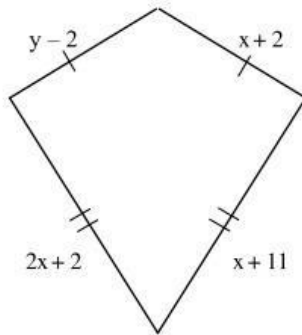
- a. 13 c. 52
b. 26 d. not enough information

10. Judging by appearance, classify the figure in as many ways as possible.



- a. rectangle, square, quadrilateral, parallelogram, rhombus
- b. rectangle, square, parallelogram
- c. rhombus, trapezoid, quadrilateral, square
- d. square, rectangle, quadrilateral

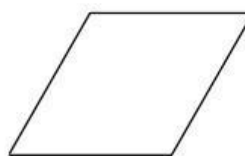
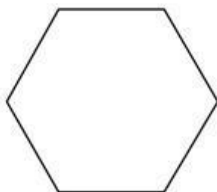
11. Find the values of the variables and the lengths of the sides of this kite.



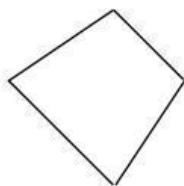
- a. $x = 9, y = 13; 7, 15$
- b. $x = 13, y = 9; 7, 15$
- c. $x = 9, y = 13; 11, 20$
- d. $x = 13, y = 9; 11, 11$

12. Which statement is true?
- a. All quadrilaterals are rectangles.
 - b. All quadrilaterals are squares.
 - c. All rectangles are quadrilaterals.
 - d. All quadrilaterals are parallelograms.

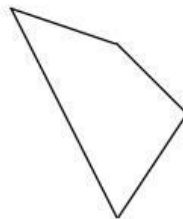
13. Judging by appearances, which figure is a trapezoid?
- a.
 - c.



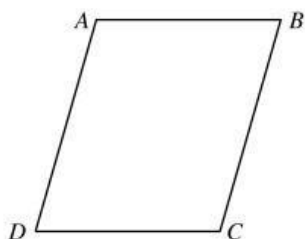
b.



d.



14. $ABCD$ is a parallelogram. If $m\angle CDA = 66$, then $m\angle BCD = \underline{\hspace{1cm}}$. The diagram is not to scale.



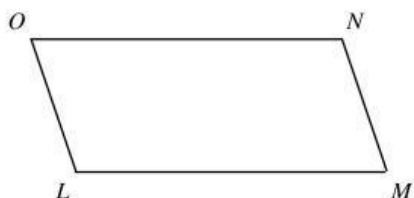
a. 66

b. 124

c. 114

d. 132

15. $LMNO$ is a parallelogram. If $NM = x + 15$ and $OL = 3x + 5$ find the value of x and then find NM and OL .



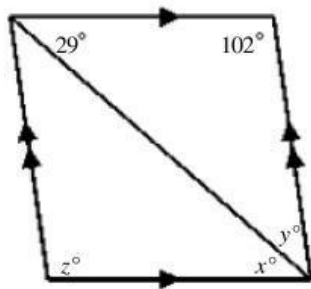
a. $x = 7, NM = 20, OL = 22$

c. $x = 7, NM = 22, OL = 22$

b. $x = 5, NM = 20, OL = 20$

d. $x = 5, NM = 22, OL = 20$

16. Find the values of the variables in the parallelogram. The diagram is not to scale.



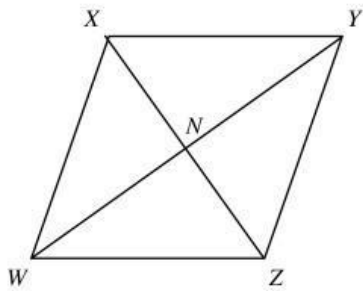
a. $x = 49, y = 29, z = 102$

c. $x = 49, y = 49, z = 131$

b. $x = 29, y = 49, z = 131$

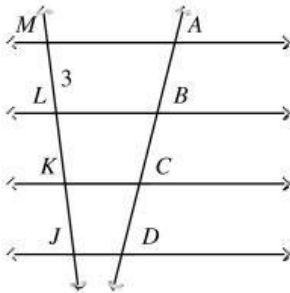
d. $x = 29, y = 49, z = 102$

17. $WXYZ$ is a parallelogram. Name an angle congruent to $\angle WZY$.



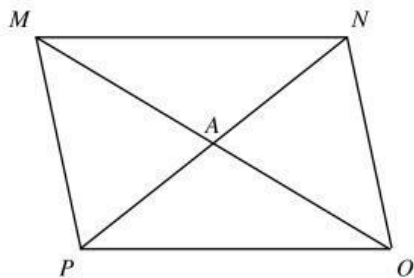
- a. $\angle ZXY$ b. $\angle XWZ$ c. $\angle ZXW$ d. $\angle WXY$

18. In the figure, the horizontal lines are parallel and $AB = BC = CD$. Find JM . The diagram is not to scale.



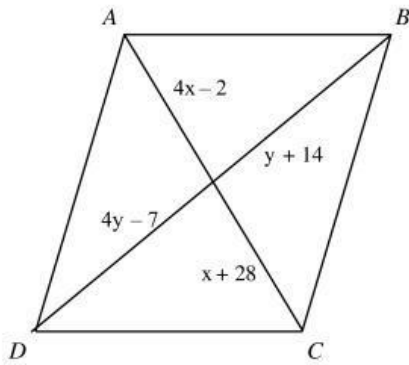
- a. 9 b. 12 c. 6 d. 3

19. Find AM in the parallelogram if $PN = 9$ and $AO = 4$. The diagram is not to scale.



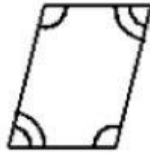
- a. 8 b. 4 c. 9 d. 4.5

20. Find values of x and y for which $ABCD$ must be a parallelogram. The diagram is not to scale.



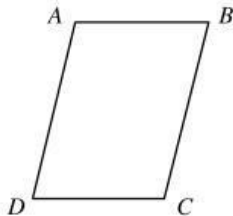
- a. $x = 10, y = 38$ b. $x = 10, y = 21$ c. $x = 10, y = 7$ d. $x = 7, y = 10$

21. Based on the information in the diagram, can you prove that the figure is a parallelogram? Explain.



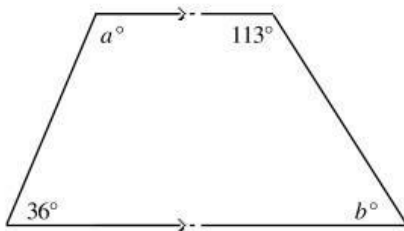
- a. Yes; opposite sides are congruent.
 b. Yes; opposite angles are congruent.
 c. No; you cannot prove that the quadrilateral is a parallelogram.
 d. Yes; two opposite sides are both parallel and congruent.

22. If $m\angle B = m\angle D = 41$, find $m\angle C$ so that quadrilateral $ABCD$ is a parallelogram. The diagram is not to scale.



- a. 41 b. 139 c. 82 d. 278

23. Find the values of a and b . The diagram is not to scale.



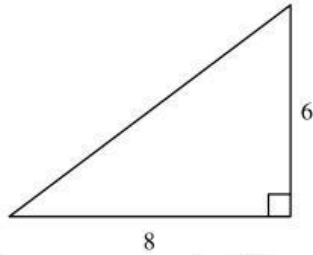
- a. $a = 144, b = 67$ c. $a = 113, b = 67$

b. $a = 144$, $b = 36$

d. $a = 113$, $b = 36$

Find the length of the missing side. The triangle is not drawn to scale.

___ 24.



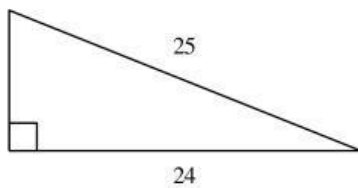
a. 28

b. 100

c. 10

d. 48

___ 25.



a. 35

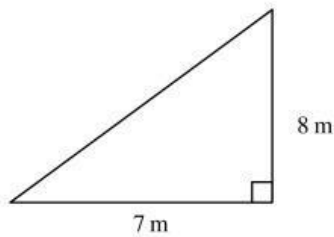
b. 49

c. 7

d. 2

Find the length of the missing side. Leave your answer in simplest radical form.

___ 26.



Not drawn to scale

a. $\sqrt{17}$ m

b. 113 m

c. $\sqrt{113}$ m

d. $\sqrt{71}$ m

___ 27. Wayne used the diagram to compute the distance from Ferris to Dunlap to Butte. How much shorter is the distance directly from Ferris to Butte than the distance Wayne found?