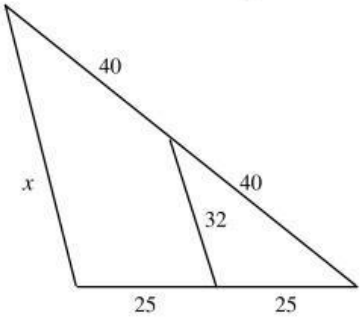
Geometry Final Exam Review

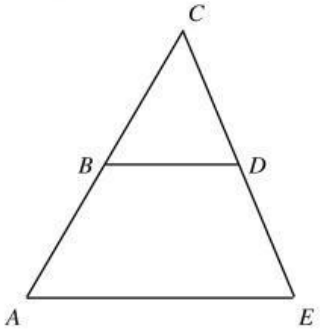
Multiple Choice
Identify the choice that best completes the statement or answers the question.

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



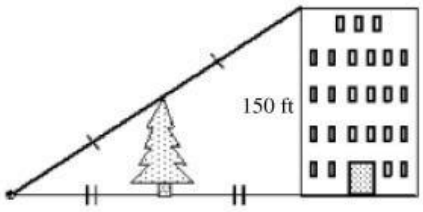
a. 32 b. 50 c. 64 d. 80

____ 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

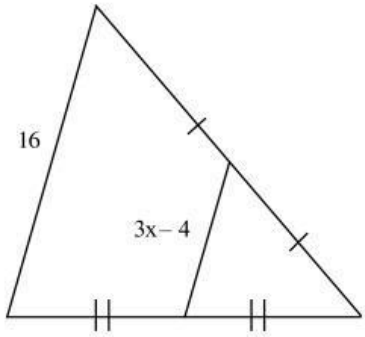
____ 3. Use the information in the diagram to determine the height of the tree. The diagram is not to scale.



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

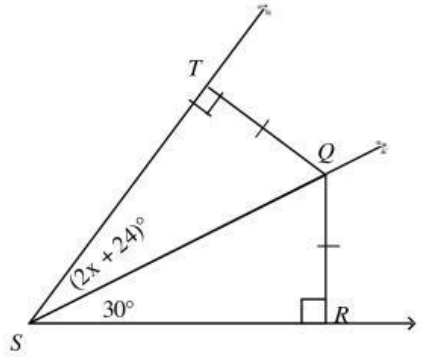
____ 4. Find the value of x.

LIVEWORKSHEETS



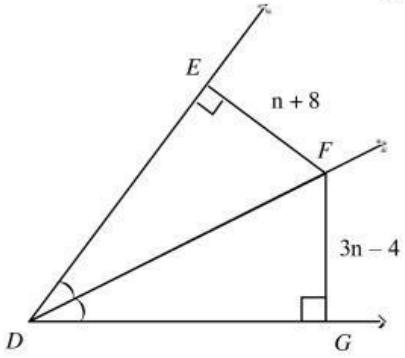
a. 4 b. 8 c. 6.6 d. 6

____ 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

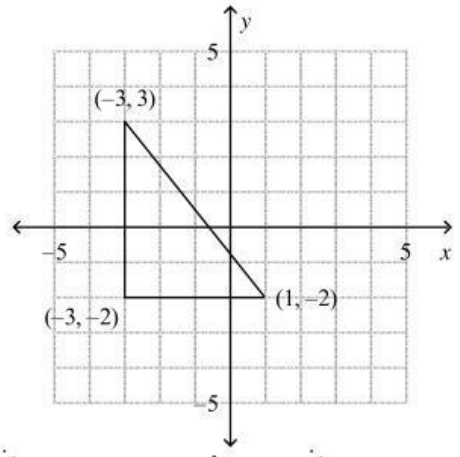
____ 6. $\overrightarrow{DF}$ bisects $\angle EDG$. Find FG. The diagram is not to scale.



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

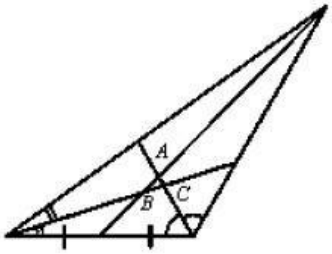
____ 7. Find the center of the circle that you can circumscribe about the triangle.

LIVEWORKSHEETS



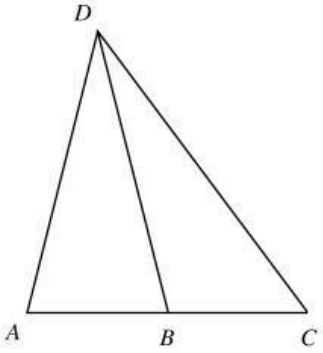
a. $(\frac{1}{2}, -1)$ b. $(-1, \frac{1}{2})$ c. $(-3, \frac{1}{2})$ d. $(-1, -2)$

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



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

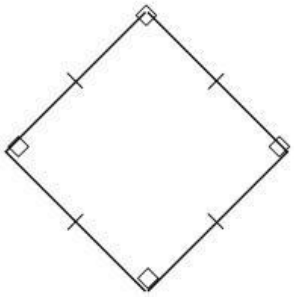
____ 9. Find the length of $\overline{AB}$, given that $\overline{DB}$ is a median of the triangle and $AC = 26$.



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

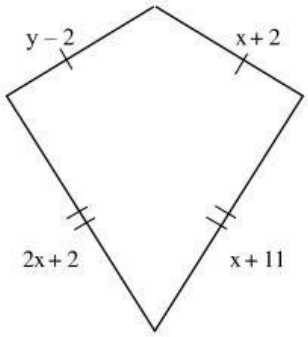
____ 10. Judging by appearance, classify the figure in as many ways as possible.

LIVEWORKSHEETS



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.

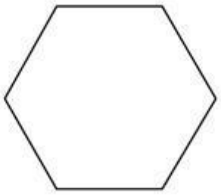


a. $x = 9, y = 13$; 7, 15
b. $x = 13, y = 9$; 7, 15
c. $x = 9, y = 13$; 11, 20
d. $x = 13, y = 9$; 11, 11

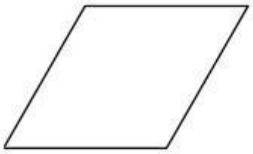
____ 12. Which statement is true?
a. All quadrilaterals are rectangles.
b. All quadrilaterals are squares.
c. All rectangles are quadrilaterals.
d. All quadrilaterals are parallelograms.

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

a.

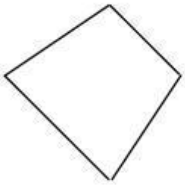


c.

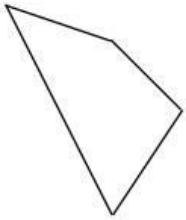


LIVEWORKSHEETS

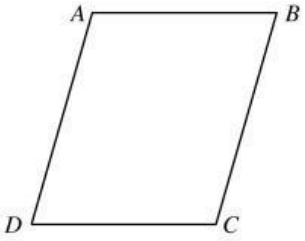
b.



d.

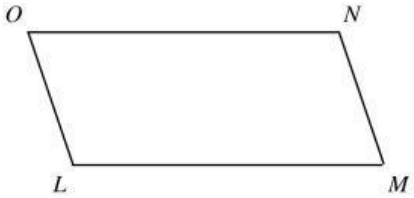


____ 14. *ABCD* is a parallelogram. If $m\angle CDA = 66$, then $m\angle BCD =$ ___?___. The diagram is not to scale.



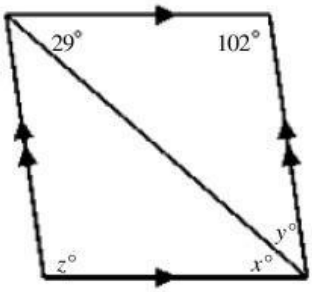
a. 66 b. 124 c. 114 d. 132

____ 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. $x = 7, NM = 20, OL = 22$
b. $x = 5, NM = 20, OL = 20$
c. $x = 7, NM = 22, OL = 22$
d. $x = 5, NM = 22, OL = 20$

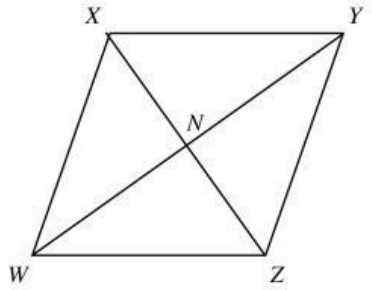
____ 16. Find the values of the variables in the parallelogram. The diagram is not to scale.



a. $x = 49,\ y = 29,\ z = 102$
b. $x = 29,\ y = 49,\ z = 131$
c. $x = 49,\ y = 49,\ z = 131$
d. $x = 29,\ y = 49,\ z = 102$

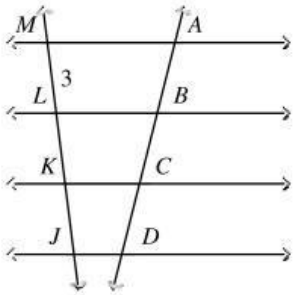
____ 17. *WXYZ* is a parallelogram. Name an angle congruent to $\angle WZY$.

LIVEWORKSHEETS



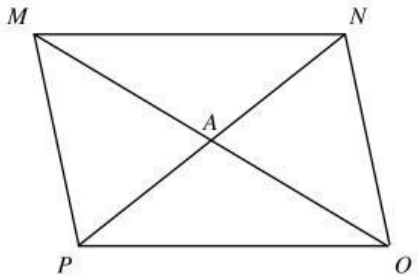
a. $\angle ZXY$ b. $\angle XWZ$ c. $\angle ZXW$ d. $\angle WXY$

____ 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

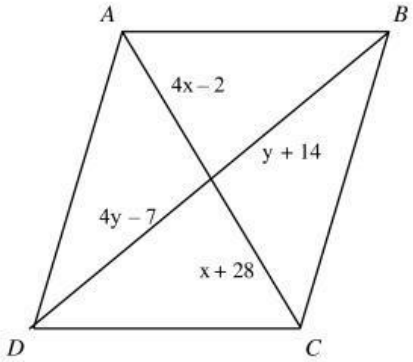
____ 19. Find AM in the parallelogram if $PN = 9$ and $AO = 4$. The diagram is not to scale.



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.

LIVEWORKSHEETS



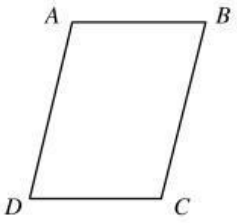
a. $x = 10, y = 38$ b. $x = 10, y = 21$ c. $x = 10, y = 7$ d. $x = 7, y = 10$

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



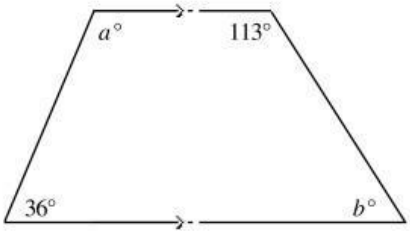
a. Yes; opposite sides are congruent.
b. Yes; opposite angles are congruent.
c. No; you cannot prove that the quadrilateral is a parallelogram.
d. Yes; two opposite sides are both parallel and congruent.

____ 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.



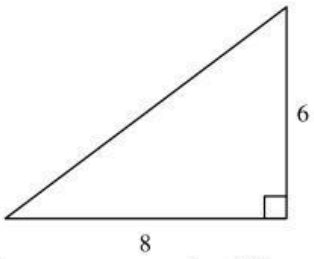
a. $a = 144, b = 67$ c. $a = 113, b = 67$

LIVEWORKSHEETS

b. $a = 144,\ b = 36$ d. $a = 113,\ b = 36$

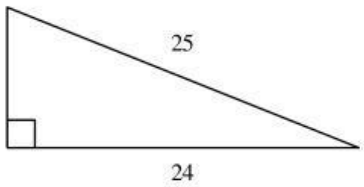
Find the length of the missing side. The triangle is not drawn to scale.

____ 24.



a. 28 b. 100 c. 10 d. 48

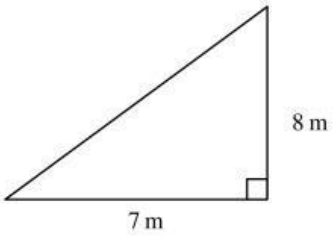
____ 25.



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?

LIVEWORKSHEETS