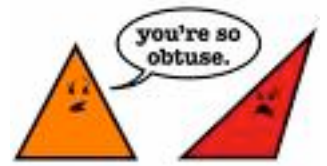


Math 7

Topics:

-Geometry Basics & Angle Relationships (w/Algebra) (STUDY QUIZ & PAST HW)

- *Basic geometry figures/vocab
 - * Complementary, Supplementary, Vertical
 - * Parallel lines cut by a transversal
 - corresponding, alternate interior/interior



-Triangles

- *Classifying by angles
- *Triangle Sum Theorem (sum of the interior angles of a triangle)
- *Classifying by Sides
- *Triangle Inequality Theorem
- *Angle and side relationships for Triangles
- *Algebra with triangles

- Quadrilaterals

- *Angle and side relationships for quadrilaterals
- *Classifying quadrilaterals
- * Algebra with quadrilaterals

I. True or False

- 1) A triangle can be right and scalene.
- 2) An obtuse triangle contains two obtuse angles.
- 3) The other two angles in a right triangle are complimentary.
- 4) Alternate exterior angles are congruent.
- 5) 43° is the supplement of a 47° angle.
- 6) Each side of a hexagon is always congruent.
- 7) Trapezoids can be isosceles.
- 8) The diagonals always bisect each other in a parallelogram.
- 9) Opposite angles are always supplementary in a parallelogram.
- 10) The diagonals in a rhombus are perpendicular.

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II. *Always, Sometimes, or Never.*

- 11) Diagonals of a parallelogram are perpendicular.
- 12) Opposite angles in a parallelogram are supplementary.
- 13) The diagonals of a rhombus are congruent.
- 14) Quadrilaterals are trapezoids.
- 15) A ray has two endpoints.
- 16) A Heptagon has 7 equal sides.
- 17) Supplementary angles are congruent.
- 18) The diagonals of a rectangle are congruent and bisect each other.
- 19) An isosceles triangle contains three congruent sides.
- 20) Corresponding angles have a sum of 90° .

III. Quadrilateral Properties

Place an *A* for always, *S* for sometimes, or *N* for never in each box.

	Parallelogram	Rectangle	Rhombus	Square	Trapezoid
Opposite sides congruent					
Opposite sides parallel					
Opposite angles congruent					
All sides congruent					
Diagonals congruent					
Diagonals perpendicular					

IV. Drawing a diagram (GIVE REASON)

- 21) In isosceles triangle ABC , $BC \cong AC$. $m\angle A = 50^\circ$. Find the measure of angles B and C .

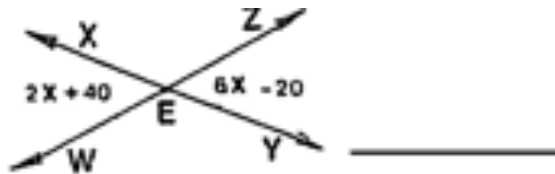
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22) In $\triangle FOX$, $m\angle F = 57^\circ$ and $m\angle X = 65^\circ$. What is the longest side of the triangle? What is the shortest side of the triangle?

23) In $\triangle DOG$, the $m\angle O$ is twice the $m\angle G$. The $m\angle D$ is four more than the $m\angle G$. Find the measure of each angle.

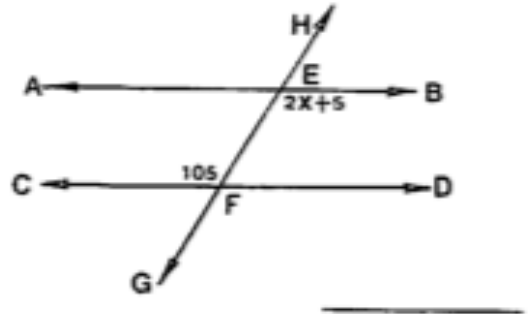
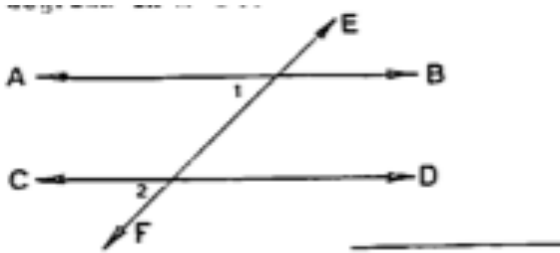
24) In parallelogram $WORK$, WF and OK intersect at Z . $OK = 14\text{cm}$. What is the length of OZ ?

24. **Angle Relationships/Parallel Lines:** Solve for x and find the measure of the missing angles. (GIVE REASON)

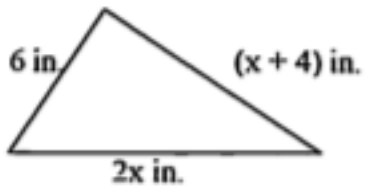


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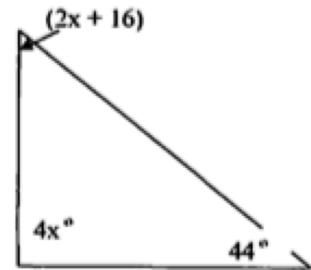
b. $m\angle 1 = 6x - 30$ and $m\angle 2 = 3x + 15$



The perimeter is 40 in. Find x .

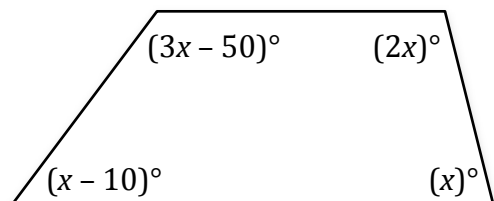


Find the measure of each angle in the triangle.



a. Find x . b. Find the measure of each angle.

Answers:



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1. T	17. S
2. F	18. A
3. T	19. S
4. F	20. S
5. F	SEE TABLE BELOW
6. F	21. $m\angle B = 50^\circ, m\angle C = 80^\circ$
7. T	22. $L = \overline{FO}, S = \overline{OX}$
8. T	23. $m\angle D = 48^\circ, m\angle O = 88^\circ, m\angle G = 44^\circ$
9. F	24. $OZ = 7cm$
10. T	25. $x = 13; m\angle PQR = 120^\circ, m\angle NQP = 60^\circ$
11. S	26. $x = 15; m\angle WEX = 70^\circ, m\angle YEZ = 70^\circ$
12. S	27. $x = 15; m\angle 1 = 60^\circ, m\angle 2 = 60^\circ$
13. S	28. $x = 50; m\angle BEF = 105^\circ$
14. S	29. $x = 10$
15. N	30. $80^\circ, 44^\circ, 56^\circ$
16. S	31. a. $x = 60$ b. $50^\circ, 60^\circ, 120^\circ, 130^\circ$

	Parallelogram	Rectangle	Rhombus	Square	Trapezoid
Opposite sides congruent	A	A	A	A	S
Opposite sides parallel	A	A	A	A	S
Opposite angles congruent	A	A	A	A	N
All sides congruent	S	S	A	A	N
Diagonals congruent	S	A	S	A	S
Diagonals perpendicular	S	S	A	A	N