Test Prep: Geometry Part 1 Mr. Paquette

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/exterior

-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, $BC \cong AC$. $m\angle A = 50°$. Find the measure of angles B and C.

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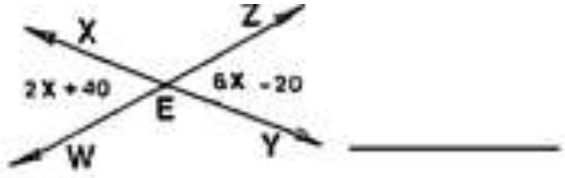
22) In ΔFOX, $m\angle F = 57°$ and $m\angle X = 65°$. What is the longest side of the triangle? What is the shortest side of the triangle?

23) In ΔDOG, 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*, $\overline{WR}$ and $\overline{OK}$ intersect at *Z*. $\overline{OK} = 14$cm. What is the length of $\overline{OZ}$?

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



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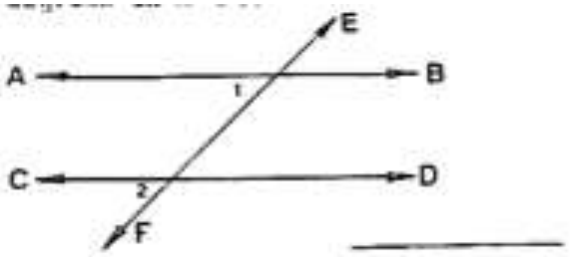
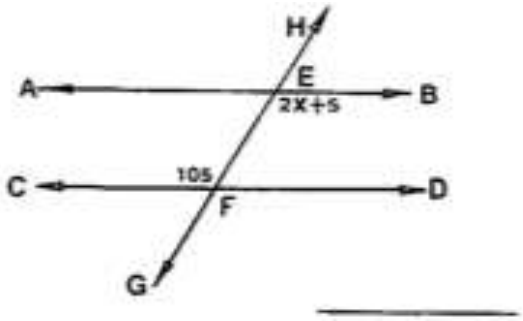
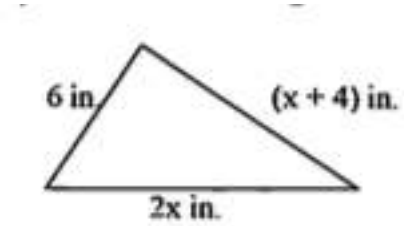
b. m∠1 = 6x-30 and m∠2 = 3x+15

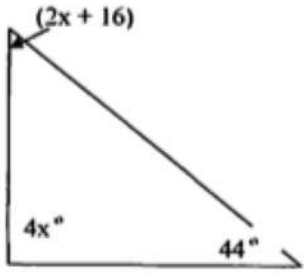




The perimeter is 40 in. Find x .

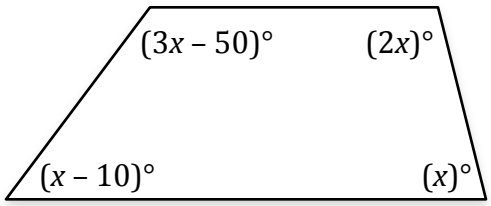


Find the measure of each angle in the triangle.



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. $m\angle B = 50^o, m\angle C = 80^o$
7. T	22. $L = \overline{FO}, S = \overline{OX}$
8. T	23. $m\angle D = 48^o, m\angle O = 88^o, m\angle G = 44^o$
9. F	24. $OZ = 7cm$
10. T	25. $x = 13; m\angle PQR = 120^o, m\angle NQP = 60^o$
11. S	26. $x = 15; m\angle WEX = 70^o, m\angle YEZ = 70^o$
12. S	27. $x = 15; m\angle 1 = 60^o, m\angle 2 = 60^o$
13. S	28. $x = 50; m\angle BEF = 105^o$
14. S	29. x = 10
15. N	30. 80^0, 44^0, 56^0
16. S	31. a. x = 60 b. 50^0, 60^0, 120^0, 130^0

	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**