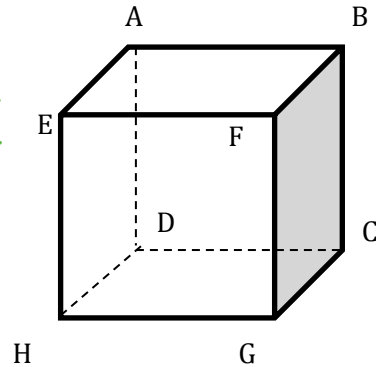# Quiz 7.1-7.4 Study Guide

Name _Solutions_____
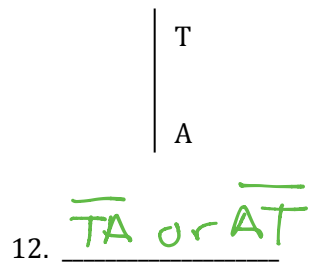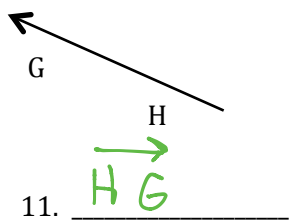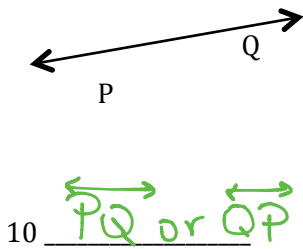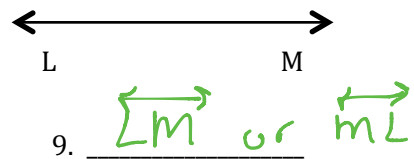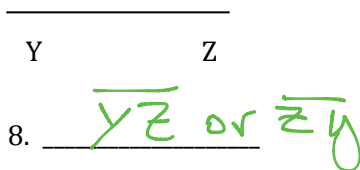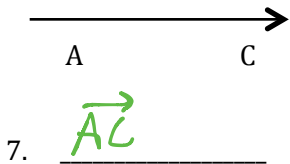
Part I: Segments, Lines, Rays, and Planes

**Use the diagram to the right for Questions 1-3.**

1. Name two segments parallel to $\overline{HD}$.

   $\overline{AE}$ and $\overline{GC}$

2. Name two segments parallel to $\overline{AB}$.

   $\overline{EF}$ and $\overline{DC}$

3. Name two segments intersecting $\overline{DC}$.

   $\overline{HD}$, $\overline{GC}$ $\overline{AD}$ and $\overline{BC}$

4. Name two segments intersecting $\overline{FG}$.

   $\overline{EF}$, $\overline{FB}$, $\overline{HG}$, and $\overline{CG}$

5. Name two segments skew to $\overline{EH}$.

   $\overline{BC}$, $\overline{AB}$, $\overline{DC}$, $\overline{FB}$, $\overline{GC}$

6. Name two segments skew to $\overline{HG}$.

   $\overline{AE}$, $\overline{AB}$, $\overline{BF}$, $\overline{AD}$, $\overline{BC}$
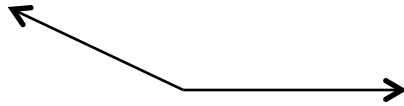
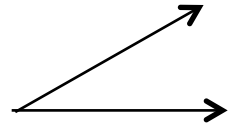**Label the following lines, segments, and rays appropriately**.

7. $\overrightarrow{AC}$ _____

8. $\overline{YZ}$ or $\overline{ZY}$ _____

9. $\overrightarrow{LM}$ or $\overrightarrow{ML}$ _____

10 $\overleftrightarrow{PQ}$ or $\overleftrightarrow{QP}$ _____

11. $\overrightarrow{HG}$ _____

12. $\overline{TA}$ or $\overline{AT}$ _____

Measure each angle and then classify it according to its measure.
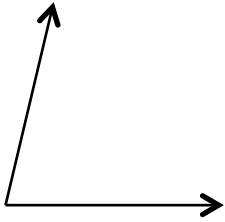
13. _**78°, acute**_

14. _**155°, obtuse**_

15. _**29° acute**_
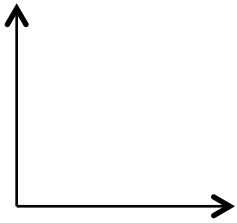
16. _**90°, right**_
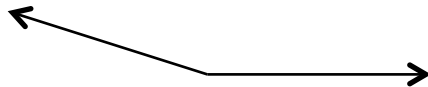
17. _**163°, obtuse**_
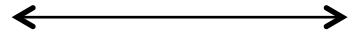
18. _**180° straight**_

Find the measures of the complement of each angle.

19. $m\angle X = 56°$

$$34°$$
$$90 - 56 = 34°$$

20. $m\angle K = 84°$

$$6°$$
$$\begin{array}{r} 90 \\ -84 \\ \hline 6 \end{array}$$

21. $m\angle L = 39°$

$$51°$$
$$\begin{array}{r} 90 \\ -39 \\ \hline 51 \end{array}$$

22. $m\angle Z = 42°$ $\quad 48°$

$$\begin{array}{r} 90 \\ -42 \\ \hline 48 \end{array}$$

Find the measures of the supplement of each angle.

23. $m\angle C = 73°$

$$107°$$
$$\begin{array}{r} 180 \\ -73 \\ \hline 107 \end{array}$$

24. $m\angle E = 21°$

$$159°$$
$$\begin{array}{r} 180 \\ -21 \\ \hline 159 \end{array}$$

25. $m\angle F = 112°$ $\quad 68°$

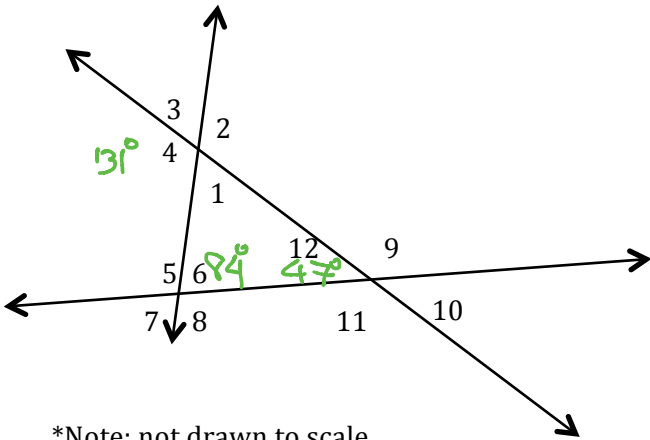$$\begin{array}{r} 180 \\ -112 \\ \hline 68 \end{array}$$

26. $m\angle Q = 45°$ $\quad 135°$

$$\begin{array}{r} 180 \\ -45 \\ \hline 135° \end{array}$$

Find the measures of all the angles if the measure of ∠4 is 131°, ∠6 is 84°, and ∠12 is 47°

27. m∠1 = __49°__

28. m∠2 = __131°__

29. m∠3 = __49°__

30. m∠5 = __96°__

31. m∠7 = __84°__

32. m∠8 = __96°__

33. m∠9 = __133°__

34. m∠10 = __47°__

35. m∠11 = __133°__

*Note: not drawn to scale

36. Name 4 pair of adjacent angles.

∠5 and ∠6   ∠1 and ∠2

∠9 and ∠10   ∠7 and ∠8

37. Name 4 pair of vertical angles.

∠9 and ∠11   ∠6 and ∠7

∠1 and ∠3   ∠10 and ∠12

Classify each triangle based on its sides and angles.

38.

57°   52°

Acute
Scalene

39.

Right
Isosales

40.

112°
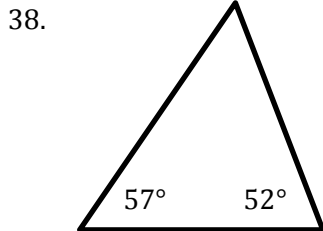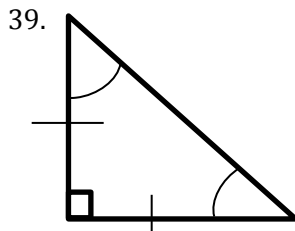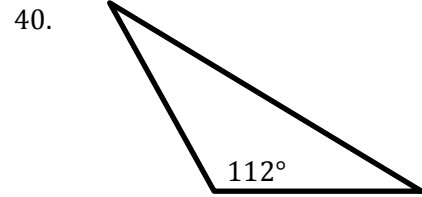
obtuse
Scalene

41. Look at Question #40. If that triangle was isosceles, what would the other two angles equal?

112°

$$2x + 112 = 180$$
$$-112 \quad -112$$
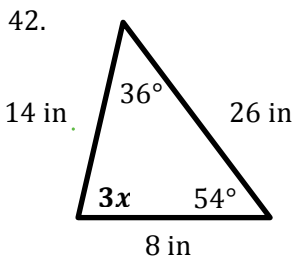$$2x = 68$$
$$\frac{2x}{2} = \frac{68}{2}$$

each angle would be 34°

or

$$180$$
$$-112$$
$$68$$

$$2\overline{)68}$$ → 34
$$-6↓$$
$$08$$
$$-8$$
$$0$$

Find the value of x in the triangle.

42.

14 in
36°
26 in
3x   54°
8 in

$$\begin{array}{r} 180 \\ - 36 \\ \hline 144 \end{array}$$

$$\begin{array}{r} 144 \\ - 54 \\ \hline 90 \end{array}$$

$$3x = 90°$$

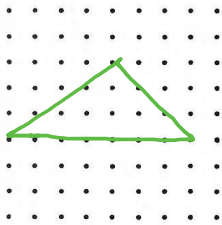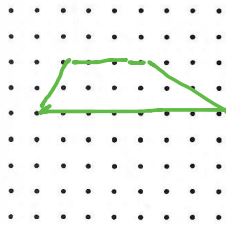$$\frac{3x}{3} = \frac{90}{3}$$

$$x = 30°$$

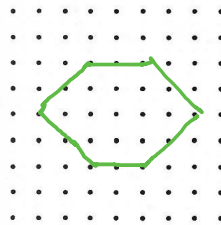## Polygons and Quadrilaterals
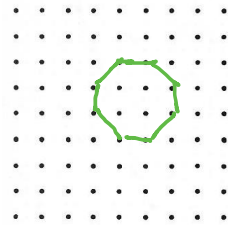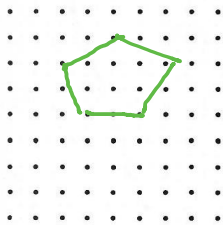
Draw each polygon.

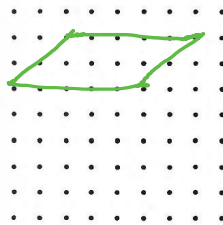43. Triangle

44. Trapezoid

45. Hexagon

46. Octagon

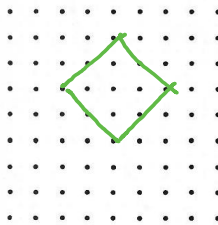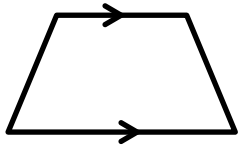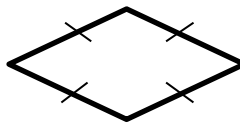

47. Pentagon

48. Parallelogram

49. Rhombus

Classify each Quadrilateral based on the information given. State how you know.
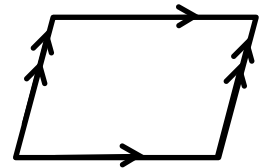
50.

Trapezoid

I pair of ll sides

51.

Rhombus

4 congruent Sides

52.

Parallelogram

2 pair of parallel Sides

53. What is a regular polygon?

A regular polygon is a closed 2 dimensional shape with all sides and angles congruent.