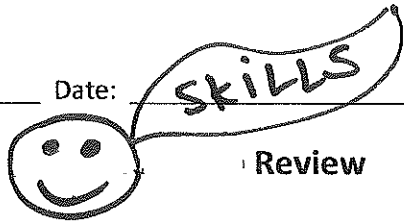


Name: _____ Date: _____

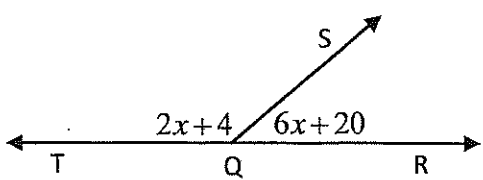


Geometry

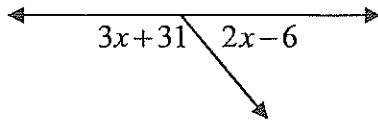
Review

Chapter 1: Tools of Geometry

- 1) Find a pattern for the sequence. Use the pattern to show the next three terms. 15, 12, 9, 6, ...
- 2) If two lines intersect, then they intersect in a _____.
- 3) If two planes intersect, then they intersect in a _____.
- 4) Which of the following could not be the intersection of two planes?
 - a. \overleftrightarrow{AB}
 - b. \overleftarrow{BA}
 - c. $\angle B$
 - d. ABC
 - e. point A
- 5) B is the midpoint of \overline{AC} . If $\overline{AB} = 2x + 1$ and $\overline{BC} = 3x - 4$, what is x? What is the measure of \overline{BC} ? What is the measure of \overline{AC} ?
- 6) Find the midpoint and distance on a number line between 6 and -15.
- 7) S is between R and T. If $\overline{RT} = 64$, $\overline{RS} = 3x + 1$ and $\overline{ST} = 2x - 2$, find x.
- 8) Draw an example of each of the following
 - a. Complementary Angles
 - b. Supplementary angles
 - c. Vertical angles
 - d. Adjacent angles
- 9) $m\angle RST = 2x + 8$, $m\angle TSW = 3x + 14$, $m\angle RSW = 7x - 2$. Find $m\angle TSW$.
- 10) Find $m\angle RQS$.



11) Find the measure of x .

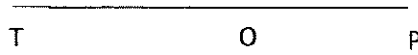


12) Find \overline{TO} given

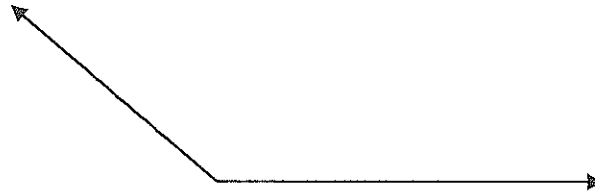
$$\overline{TO} = 2x + 12$$

$$\overline{OP} = x + 5$$

$$\overline{TP} = 50$$



13) What is the measure of this angle?
How would you classify the angle?



14) \overline{EM} bisects $\angle GEO$

$$m\angle GEM = 3x + 5$$

$$m\angle MEO = x + 29$$

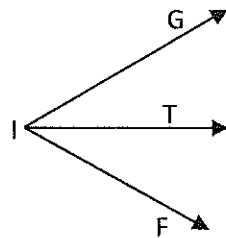
Find $m\angle GEO$.

15) $m\angle GIT = 2x + 15$

$$m\angle FIT = x$$

$$m\angle GIF = 4x + 5$$

Find $m\angle GIT$.



16) Given the points $(2, -4)$ and $(-5, 1)$:

a. Find the distance between the points.

b. Find the midpoint between the points.

17) Given the points $(-6, -5)$ and $(3, 2)$:

a. Find the distance between the points to the nearest tenth.

b. Find the midpoint between the points.

18) O is the midpoint of \overline{DG} . Find the coordinate of G if O is 7 and D is 3.

19) Which is the missing endpoint if the midpoint is $(0, -6)$ and the other endpoint is $(3, 8)$?
a. $(1.5, 1)$ b. $(1, 1.5)$ c. $(-3, -20)$ d. $(20, -3)$

20) I. What is the circumference of a circle with: (Leave answers in π form)

- a. Radius of 4 cm b. diameter of 32 cm

II. What is the area of a circle with: (Leave answers in π form)

- b. Radius of 4 cm b. diameter of 32 cm

21) The perimeter of a rectangle is 28 feet and the base is 8 feet. What is the height?

22) The area of a rectangle is 54 cm^2 and the height is 9 cm. What is the base?

Chapter 2: Reasoning and Proof

23) Given the sentence "If you are good, then Santa will bring you presents," write:

- a. The converse:
b. The inverse:
c. The contrapositive:
d. The biconditional:

24) Draw a conclusion:

- If a student gets an A on the final exam, then the student will pass the course.
- Felicia gets an A on the music theory final exam.

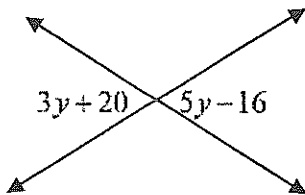
25) Draw a conclusion:

- If it is a national holiday, then school is not in session.
- If school is not in session, then students are at home.

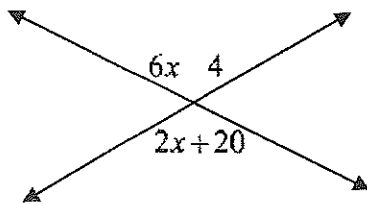
26) Which property of equality or congruence justifies each statement?

- a. If $3x+14=80$, then $3x=66$.
- b. If $m\angle A=15$, then $3m\angle A=45$.
- c. If $4m\angle C=100$, then $m\angle C=25$.

27) Solve for y .



28) Solve for x .



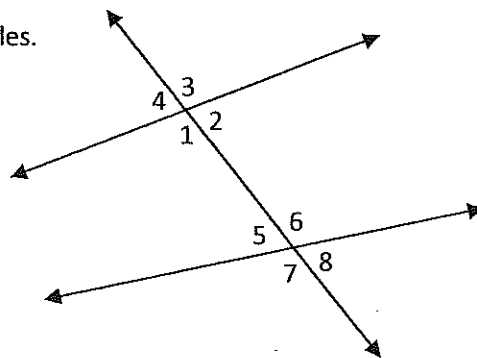
29) $\angle ABC$ and $\angle DBC$ are complementary. What is the $m\angle DBC$ if $m\angle ABC = 4x - 10$ and $m\angle DBC = x + 30$?

30) If the supplement of $\angle T$ is 47° , what is the measure of $\angle T$?

Chapter 3: Parallel and Perpendicular Lines

31) Determine the relationship of the following angles.

- a. 1 and 2
- b. 1 and 6
- c. 3 and 6
- d. 1 and 7
- e. 1 and 5
- f. 2 and 4

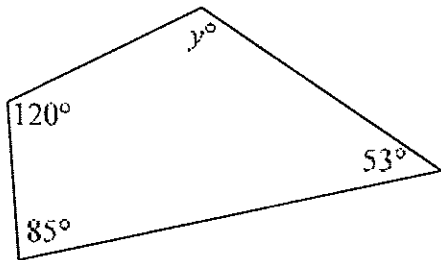


32) Fill in the blank.

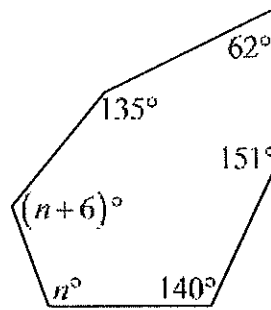
- a. Angles that form a linear pair _____.
- b. Angles that are vertical are _____.
- c. Corresponding angles of parallel lines are _____.
- d. Same-side interior angles of parallel lines are _____.

41) Find the missing angle measure.

a.



b.



42) Find the sum of the measures of each polygon.

a. Dodecagon

b. nonagon

43) Find the measure of an interior angle and an exterior angle of each regular polygon.

a. Pentagon

b. 18-gon

44) Find the slope of the line passing through the following points:

a. $(-2, 3)$ and $(-6, -5)$

b. $(6, 9)$ and $(-3, -8)$

45) Find the slope of the line parallel to the line passing through the following points:

a. $(-2, 3)$ and $(-6, -5)$

b. $(6, 9)$ and $(-3, -8)$

46) Find the slope of the line perpendicular to the line passing through the following points:

a. $(-2, 3)$ and $(-6, -5)$

b. $(6, 9)$ and $(-3, -8)$

47) Determine which line is perpendicular to $y = \frac{2}{3}x + 6$.

a. $y = \frac{-2}{3}x + 7$

b. $y = \frac{3}{2}x - 5$

c. $y = \frac{-3}{2}x + 8$

d. $y = \frac{2}{3}x - 6$

48) Determine which line is parallel to $y = 4x - 3$.

a. $y = \frac{-1}{4}x + 7$

b. $y = \frac{1}{4}x - 5$

c. $y = -4x + 8$

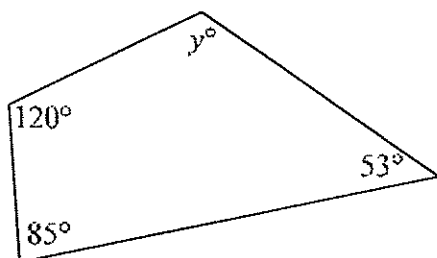
d. $y = 4x - 6$

49) How can you determine if two lines are parallel?

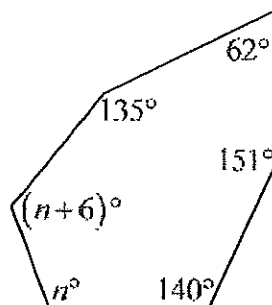
50) How can you determine if two lines are perpendicular?

41) Find the missing angle measure.

a.



b.



42) Find the sum of the measures of each polygon.

a. Dodecagon

b. nonagon

43) Find the measure of an interior angle and an exterior angle of each regular polygon.

a. Pentagon

b. 18-gon

44) Find the slope of the line passing through the following points:

a. $(-2, 3)$ and $(-6, -5)$

b. $(6, 9)$ and $(-3, -8)$

45) Find the slope of the line parallel to the line passing through the following points:

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47) Determine which line is perpendicular to $y = \frac{2}{3}x + 6$.

a. $y = \frac{-2}{3}x + 7$

b. $y = \frac{3}{2}x - 5$

c. $y = \frac{-3}{2}x + 8$

d. $y = \frac{2}{3}x - 6$

48) Determine which line is parallel to $y = 4x - 3$.

a. $y = \frac{-1}{4}x + 7$

b. $y = \frac{1}{4}x - 5$

c. $y = -4x + 8$

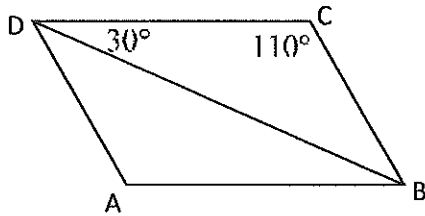
d. $y = 4x - 6$

49) How can you determine if two lines are parallel?

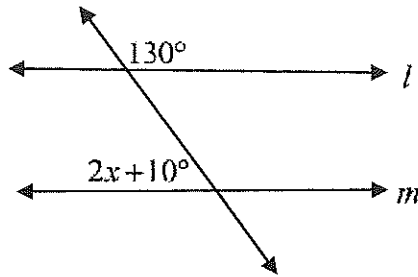
50) How can you determine if two lines are perpendicular?

51) How can you determine if two lines intersect, but are not perpendicular?

52) Given $\overline{AD} \parallel \overline{BC}$, find $m\angle BDA$



53) Given: $l \parallel m$, find x .

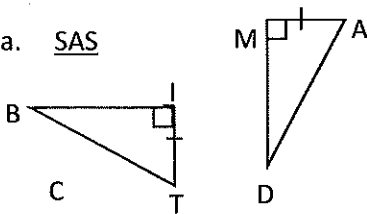


Chapter 4: Congruent Triangles

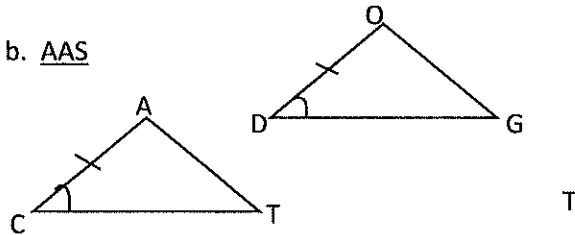
54) Given that $\triangle IMP \cong \triangle OGR$, name all of the pairs of \cong corresponding parts.

55) For each figure below, state the parts you would need to know are congruent in order to prove the triangles congruent by the method stated.

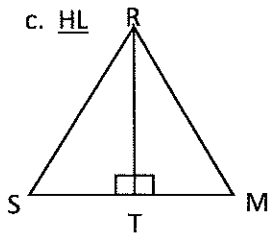
a. SAS



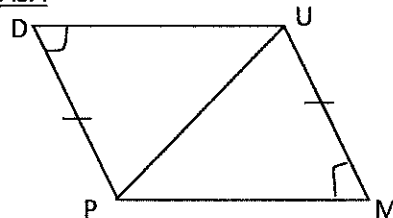
b. AAS



c. HL

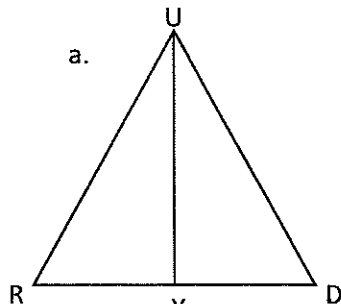


d. ASA



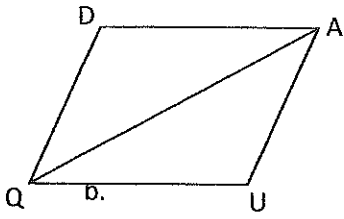
56) Use the given information to make a conclusion about each figure.

a.



I) Y is the midpoint of \overline{RD}

II) $\overline{UY} \perp \overline{RD}$

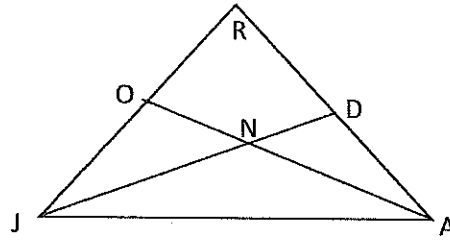


III) \overline{UY} bisects $\angle RUD$

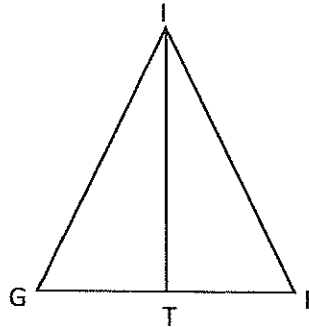
I) $\overline{DA} \parallel \overline{QU}$

II) What parts are congruent just by the picture?

57) Given: $\angle JOA \cong \angle ADJ$
 $\overline{ON} \cong \overline{ND}$
 Prove: $\triangle JON \cong \triangle ADN$



58) Given: T is the midpoint of \overline{GF}
 $\angle GTI \cong \angle FTI$
 Prove: $\angle G \cong \angle F$

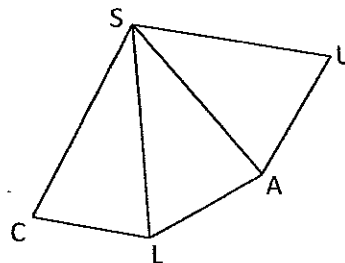


59) Given: $\overline{SL} \perp \overline{CL}$

$\overline{SA} \perp \overline{AU}$

$\overline{SC} \cong \overline{SU}$

$\triangle SLA$ is isosceles with base \overline{LA}



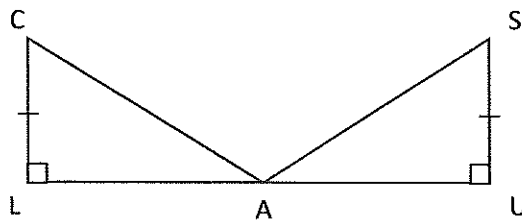
Prove: $\triangle SCL \cong \triangle SUA$

60) A is the midpoint of \overline{LU}

$$\angle CAL = 2x + 14$$

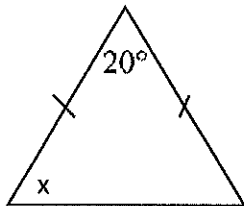
$$\angle SAU = 3x - 24$$

$$CA = x - 10$$



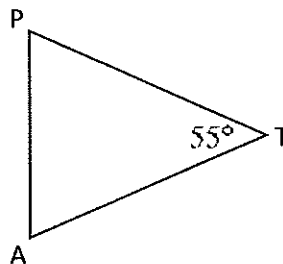
Find the measure of \overline{SA} .

61) Find x



62) $\triangle TAP$ is isosceles with vertex angle t .

Find $m\angle A$.

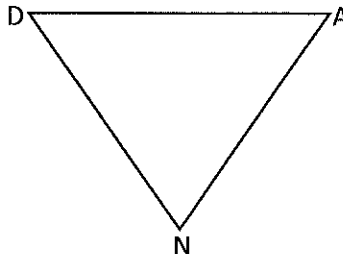


63) $\triangle DAN$ is isosceles with base \overline{AD} .

$$\angle A = 4x - 12$$

$$\angle D = x + 33$$

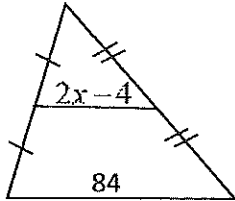
Find $m\angle D$



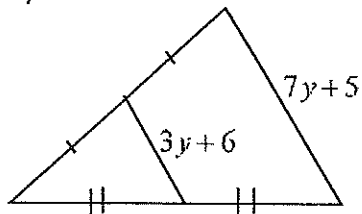
64) $\triangle ABC$ is isosceles with $\angle A$ as the vertex angle. If $m\angle B = 3x + 4$, $m\angle C = 5x - 8$. Find $m\angle B$

65) In $\triangle MLK$, \overline{MK} is 20in. long. What is its midsegment?

66) Solve for x.

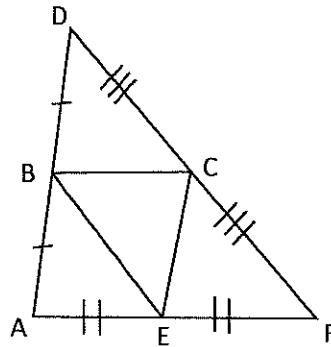


67) Solve for y.

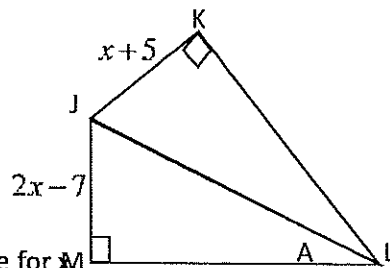


68) a. If $DF = 24$, $BC = 6$, and $DB = 8$,
what is the perimeter of $\triangle EBC$?

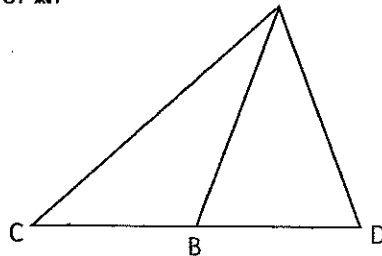
b. If the perimeter of $\triangle BCE$ is 17,
what is the perimeter of $\triangle ADF$?



69) \overline{LJ} bisects $\angle KLM$, find x, JK, and JM.

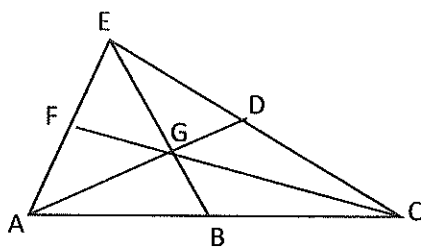


70) \overline{AB} is a median. $CD = 18$, $BD = x-6$. Solve for x.



71) G is the centroid

- a. If $GD = 7$, what is AG ?
- b. If $GC = 12$, what is CF ?
- c. If $EB = 48$, what is GB ?



72) In $\triangle FUN$, $UN = 10\text{cm}$, $UF = 16\text{cm}$, and $FN = 14\text{cm}$. Which angle is the smallest?

73) In $\triangle HAT$, $\angle A = 47^\circ$, $\angle T = 93^\circ$. List the sides in order from least to greatest.

74) Could the following be lengths of a triangle?

- a. 5, 9, 13
- b. 7, 14, 20
- c. 1, 5, 7
- d. 2, 2, 3

75) If one side of a triangle is 17 cm and the second side is 39 cm, what are the possible side lengths for the third side?