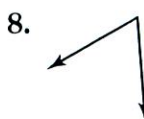
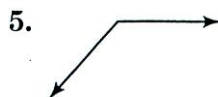
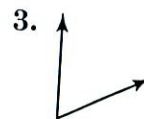
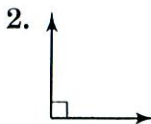
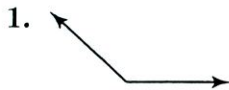


10-1

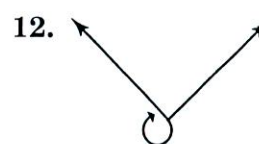
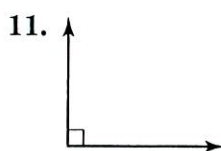
Skills Practice

Angle Relationships

Classify each angle as *acute*, *obtuse*, *right*, or *straight*.



Estimate the measurement of each angle in degrees.

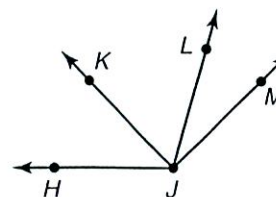


Use the figure at the right to answer Questions 13–15.

13. Name the acute angles.

14. Name the obtuse angles.

15. Name two angles that are adjacent.

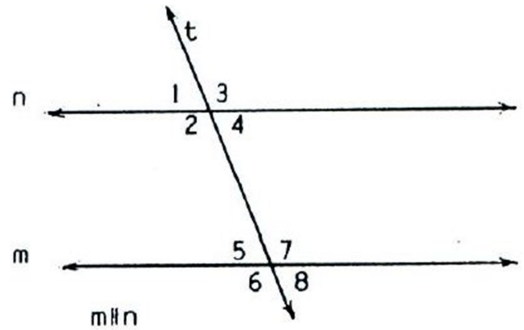


Name: _____ Date: _____ Period: _____

WS "Stilwell Practice 10-1"

Use the figure to answer the questions.

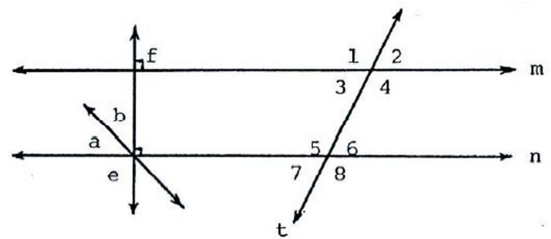
- 1) $\angle 3$ and \angle ___ are corresponding angles.
- 2) $\angle 5$ and \angle ___ are vertical angles.
- 3) $\angle 4$ and \angle ___ are alternate interior angles.
- 4) $\angle 1$ and \angle ___ are alternate exterior angles.
- 5) If $m\angle 4 = 67^\circ$, then $m\angle 8 =$ _____
- 6) If $m\angle 1 = 74^\circ$, then $m\angle 2 =$ _____



Use the word bank and the figure to answer the questions.

Word Bank

A. Vertical Angles	D. Complementary Angles
B. Supplementary Angles	E. Alternate Interior Angles
C. Corresponding Angles	F. Alternate Exterior Angles



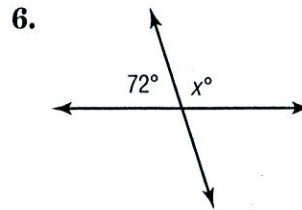
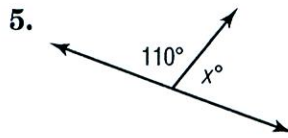
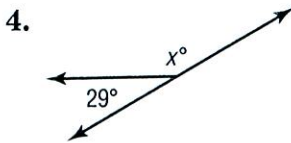
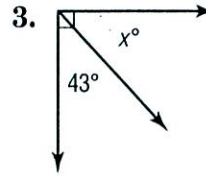
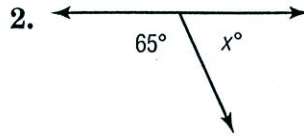
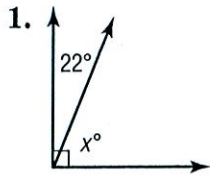
- 7) $\angle 1$ & $\angle 4$ are _____
- 8) $\angle 1$ & $\angle 5$ are _____
- 9) $\angle 1$ & $\angle 2$ are _____
- 10) $\angle 1$ & $\angle 8$ are _____
- 11) $\angle a$ & $\angle b$ are _____
- 12) $\angle 3$ & $\angle 6$ are _____
- 13) $\angle e$ & $\angle f$ are _____
- 14) $\angle 4$ & $\angle 5$ are _____
- 15) $\angle 3$ & $\angle 7$ are _____
- 16) $\angle 4$ & $\angle 8$ are _____
- 17) $\angle 5$ & $\angle 7$ are _____
- 18) $\angle 6$ & $\angle 7$ are _____
- 19) Line t is a _____.
- 20) If $m\angle b = 43^\circ$, then $m\angle a =$ _____
- 21) If $m\angle a = 48\frac{1}{2}^\circ$, then $m\angle b =$ _____
- 22) If $m\angle 8 = 112^\circ$, then $m\angle 7 =$ _____
- 23) If $m\angle 5 = 143^\circ$, then $m\angle 1 =$ _____
- 24) If $m\angle 3 = 87^\circ$, then $m\angle 5 =$ _____

10-2

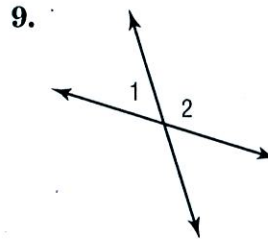
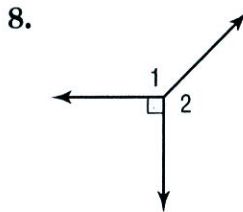
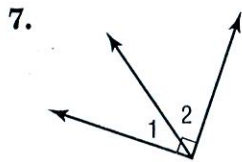
Practice

Complementary and Supplementary Angles

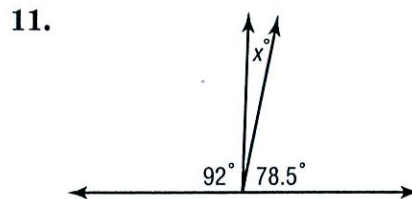
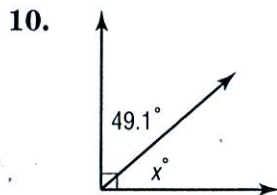
Find the value of x in each figure.



Classify each pair of angles as *complementary*, *supplementary*, or *neither*.



ALGEBRA Find the value of x in each figure.



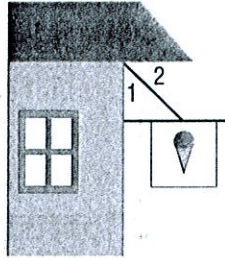
13. **ALGEBRA** If $\angle C$ and $\angle D$ are supplementary, and the measure of $\angle D$ is 45° , what is the measure of $\angle C$?

10-2

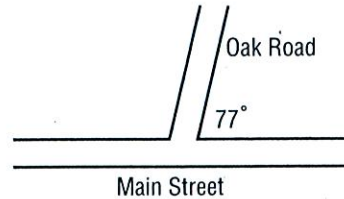
Word Problem Practice

Complementary and Supplementary Angles

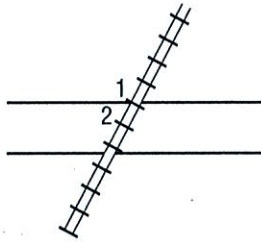
- 1. SIGN** The support wire for a sign meets the wall and the overhang as shown below. If $m\angle 2 = 42^\circ$, find $m\angle 1$. Explain your reasoning.



- 2. STREETS** Main Street intersects Oak Road. If a right-hand turn onto Oak Road requires a 77° turn, what degree must a left-hand turn onto Oak Road make?



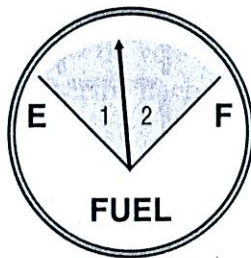
- 3. RAILROAD** East of the town of Rockport, the railroad tracks intersect Highway 67 as shown below. If $m\angle 1 = 133^\circ$, find $m\angle 2$. Explain your reasoning.



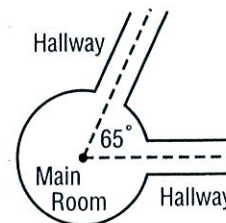
- 4. CAMPING** Jonna and Elizabeth found a level campsite and pitched their tent as shown below. If $m\angle 1 = 120^\circ$, find $m\angle 2$. Explain your reasoning.



- 5. GAS GAUGE** Below is a picture of the gas gauge in Sergio's car. The angles made by the indicator are complementary. If the $m\angle 1 = 42^\circ$, what is the $m\angle 2$?



- 6. ARCHITECTURE** The plans for a new aquarium call for several hallways of exhibits leading out of a circular main room. Because of the size of the tanks that will be used, the angle formed between two adjacent hallways can be no smaller than 65° . What is the maximum number of hallways that can be built leading out of the main room?

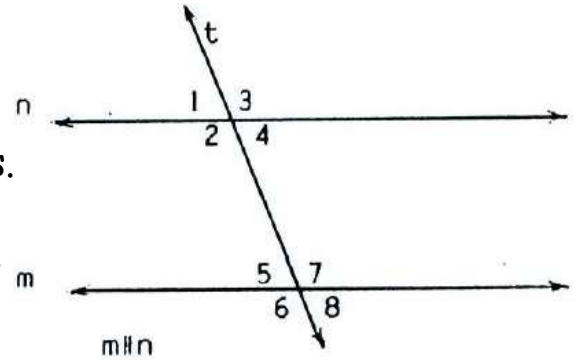


Name: _____ Date: _____ Period: _____

WS "Stilwell Practice 10-4"

For questions 1-8, use the figure to answer the questions.

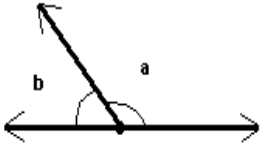
- 1) $\angle 4$ and \angle ___ are adjacent angles.
- 2) $\angle 1$ and \angle ___ are corresponding angles.
- 3) $\angle 6$ and \angle ___ are alternate exterior angles.
- 4) $\angle 5$ and \angle ___ are alternate interior angles.
- 5) $\angle 7$ and \angle ___ are vertical angles.
- 6) If $m \angle 3 = 82^\circ$, then $m \angle 7 =$ _____
- 7) If $m \angle 8 = 66^\circ$, then $m \angle 5 =$ _____
- 8) If $m \angle 8 = 66^\circ$, then $m \angle 6 =$ _____



For questions 9-13, fill in the table:

Angle Measure	Complement	Supplement
9) 53°		
10) 138°		
11) 77°		
12) 164°		
13) 9°		

For questions 14-16, classify the pair of angles as complementary, supplementary, or neither:

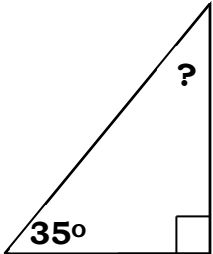
- 14) $36^\circ, 64^\circ$ _____ 15)  _____ 16) $18^\circ, 72^\circ$ _____

OVER \longrightarrow

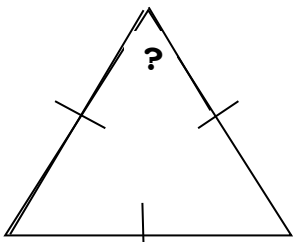
For numbers 17-20:

a) Name the triangle.

b) Give the measure of the missing angle.

17)  a) _____, _____ b) _____

18)  a) _____, _____ b) _____

19)  a) _____, _____ b) _____

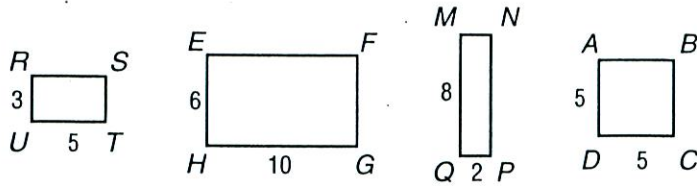
20)  a) _____, _____ b) _____

10-7

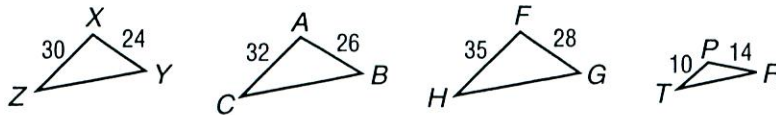
Practice
Similar Figures

Show Proportion & steps
For # 3-7 on back

1. Which rectangle is similar to rectangle *RSTU*?

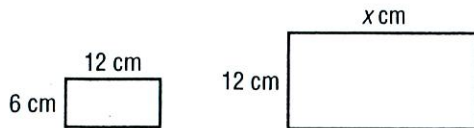


2. Which triangle is similar to triangle *XYZ*?

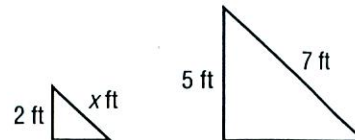


Find the value of *x* in each pair of similar figures.

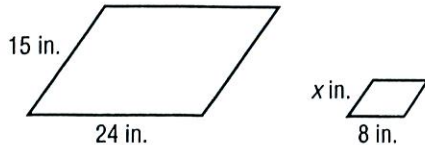
3.



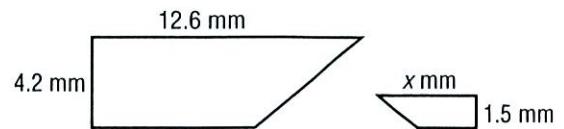
4.



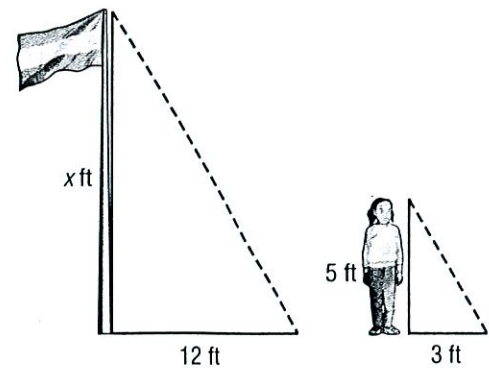
5.



6.



7. **FLAGPOLES** Tasha wants to find the height of the flagpole at school. One morning, she determines the flagpole casts a shadow of 12 feet. If Tasha is 5 feet tall and casts a shadow of 3 feet, what is the height of the flagpole?



Name: _____ Date: _____ Period: _____

Chapter 10: Geometry

Bringing It All Together #1

Vocabulary Check

Circle the correct term best completes the sentence.

- 1) Degrees are the unit of measure for (angles, lengths).
- 2) Two angles are (complementary, supplementary) angles if the sum of their measures equals 90° .
- 3) A scalene triangle has (two, no) congruent sides.
- 4) Vertical angles are (congruent, similar).
- 5) The angles of a triangle add up to (360° , 180°).
- 6) An isosceles triangle has (no congruent sides, at least two congruent sides).
- 7) Congruent angles have the same (sides, measure).
- 8) Alternate interior angles are on the (same, opposite) side(s) of the transversal.
- 9) *Define **Similar Figures** in your own words _____

- 10) *Define **Adjacent Angles** in your own words _____

State whether the statement is *true* or *false*.

If *false*, replace the underlined word or number to make a true sentence.

- 11) Two angles with measures adding to 180° are called complementary angles.

- 12) An equilateral triangle has three angles that all measure 60° . _____
- 13) Two angles who share a vertex and a side are called corresponding angles.

- 14) Similar figures have proportional sides and congruent angles. _____

OVER →

For questions 15-17, choose the correct answer.

_____ 15) The symbol that represents "congruent" is : a) \cong b) \sim c) $=$

_____ 16) A triangle with no sides congruent is:

a) isosceles b) scalene c) obtuse d) equilateral

_____ 17) The sum of the angles in a triangle are: a) 360° b) 182° c) 180°

For questions 18-24, use the figure to answer the questions.

18) $\angle 7$ and \angle ___ are corresponding angles.

19) $\angle 1$ and \angle ___ are vertical angles.

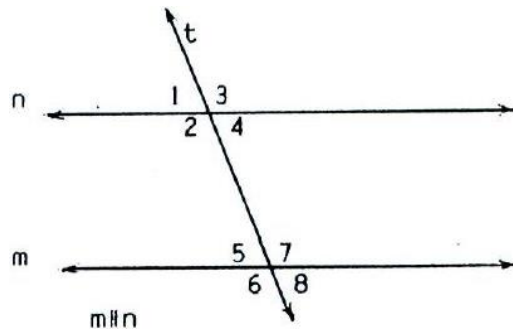
20) $\angle 4$ and \angle ___ are alternate interior angles.

21) $\angle 6$ and \angle ___ are alternate exterior angles.

22) $\angle 8$ and \angle ___ are adjacent angles.

23) If $m\angle 4 = 37^\circ$, then $m\angle 8 =$ _____

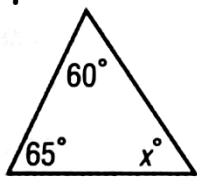
24) If $m\angle 1 = 54^\circ$, then $m\angle 2 =$ _____



For questions 25-30, fill in the table.

Angle Measure	Complement	Supplement
25) 73°		
26) 149°		
27) $103\frac{4}{9}^\circ$		
28) 65.86°		
29) $2\frac{5}{16}^\circ$		
30) 90.09°		

For questions 31-32: a) Name the triangle. b) Give the measure of the missing angle.

31)  a) _____, _____ b) _____

32)  a) _____, _____ b) _____

Name: _____ Date: _____ Period: _____

Chapter 10: Geometry

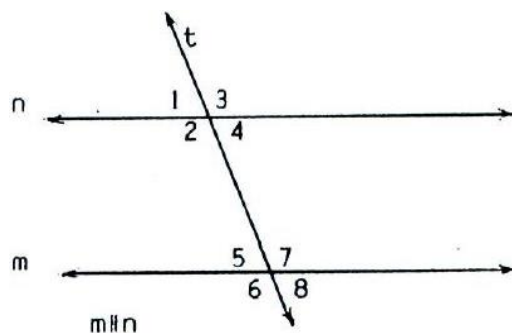
Bringing It All Together #2

For questions 1-10, determine whether the statement is *true* or *false*.

- _____ 1) Vertical angles always have the same measure.
_____ 2) Complementary angles add up to 90° .
_____ 3) Similar figures have the same shape and are the same size.
_____ 4) Adjacent angles share the same vertex and a common side.
_____ 5) Corresponding angles are on the same side of the transversal.
_____ 6) The angles of a triangle add up to 180° .
_____ 7) An obtuse triangle has two obtuse angles.
_____ 8) Alternate exterior angles are on the same side of the transversal.
_____ 9) Supplementary angles add up to 90° .
_____ 10) An isosceles triangle is also an equilateral triangle.

For questions 11-17, use the figure to answer the questions.

- 11) $\angle 3$ and \angle ___ are corresponding angles.
12) $\angle 5$ and \angle ___ are vertical angles.
13) $\angle 2$ and \angle ___ are alternate interior angles.
14) $\angle 3$ and \angle ___ are alternate exterior angles.
15) $\angle 1$ and \angle ___ are adjacent angles.
16) If $m\angle 4 = 47^\circ$, then $m\angle 8 =$ _____
17) If $m\angle 1 = 64^\circ$, then $m\angle 2 =$ _____



For questions 18-20, choose the correct answer.

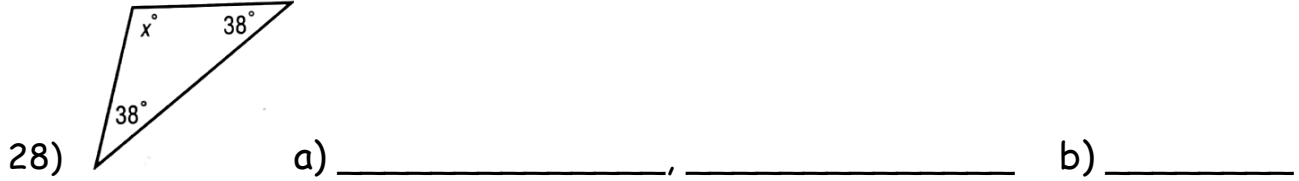
- _____ 18) The symbol that represents "congruent" is: a) \cong b) \sim c) $=$
_____ 19) A scalene triangle has:
a) no \cong angles b) at least 2 \cong angles c) all 3 \cong angles
_____ 20) If two figures are similar:
a) only corresponding sides are proportional
b) only corresponding angles are \cong
c) corresponding sides are proportional and corresponding angles are \cong

OVER \longrightarrow

For questions 21-26, fill in the table.

Angle Measure	Complement	Supplement
21) 47°		
22) 126°		
23) $89\frac{7}{8}^\circ$		
24) 154.6°		
25) $119\frac{2}{3}^\circ$		
26) 112.709°		

For questions 27-28: a) Name the triangle. b) Give the measure of the missing angle.



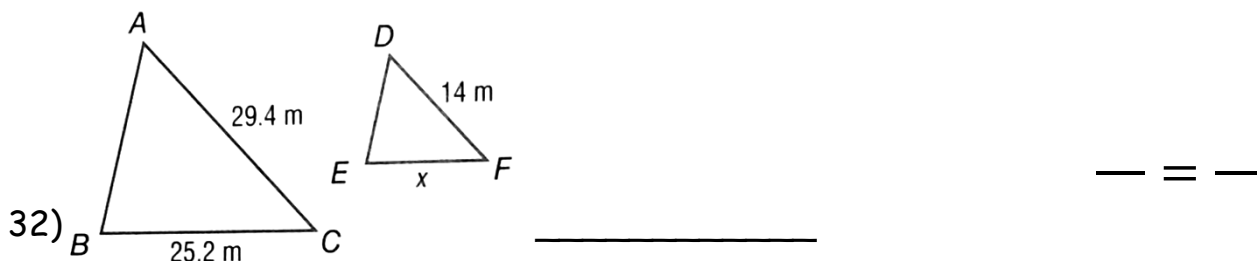
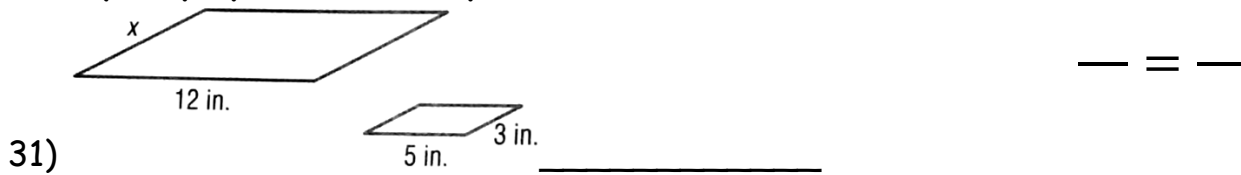
For questions 29-30, draw the triangle with the given conditions.

29) Acute and Equilateral:

30) Scalene and Right:

For questions 31-32, find the value of x in each pair of similar figures.

Show your proportion and steps!



FINALLY DONE

