Good morning!

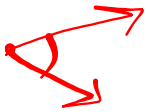
1. "Here"
2. Introduction
3. Notes on Vocab
4. Angle Practice to CTLS
5. Homework on DeltaMath

GEOMETRY VOCABULARY

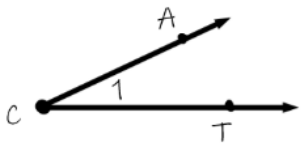
Important Symbols:

∠ angle	"m" measure	|| parallel to	⊥ perpendicular to

1. Two Rays sharing the same initial point form an angle.



- The initial point where the rays meet is called the vertex of an angle.
- We can name the angle shown right four different ways:
  - ∠ACT
  - ∠TCA
  - ∠C
  - ∠1



- Name the two rays: $\overrightarrow{CA}$ and $\overrightarrow{CT}$.
- If multiple angles share a common vertex, we must use three letters or the number label to name the angle.

2. An angle with a measure that is less than 90° is called an acute angle.

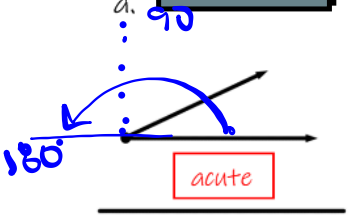
3. An angle with a measure greater than 90° is called an obtuse angle.

4. An angle with that measures exactly 180° is called a straight angle or a line.

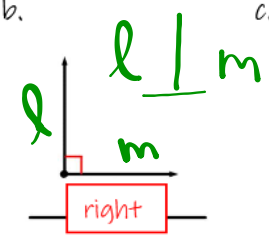
5. An angle that measures exactly 90° is called a right angle.

6. Label each of the following by the vocab word that describes the size of the angle.

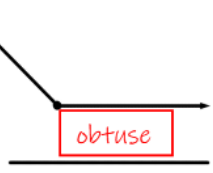
a.



b.



c.

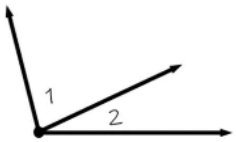


d.

7. Two lines that intersect to form a right angle are called perpendicular lines.

- The symbol ⊥ indicates that one line is perpendicular to another.

8. Two angles that share a common vertex and a common ray are called adjacent angles.



- The sum of angles 1 and 2 is 96 degrees. If angle 1 is 58 degrees, what is the measure of angle 2? $96 - 58 = \boxed{38^\circ}$

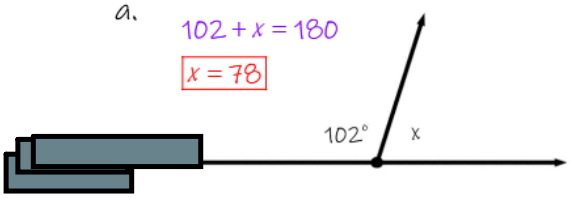
9. When the noncommon sides of two adjacent angles form a straight line, they are called a Linear Pair

- The sum of the two angles of a linear pair is 180°.
- When two angles have a sum of 180° they are also called supplementary. 180°
- We can use the equation angle + angle = 180 to solve problems when angles are supplementary.
- Solve for x:

a.

$102 + x = 180$

$\boxed{x = 78}$

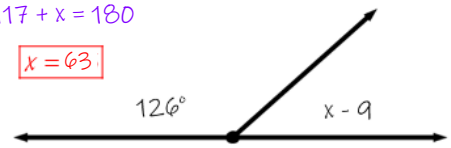


b.

$126 + x - 9 = 180$

$117 + x = 180$

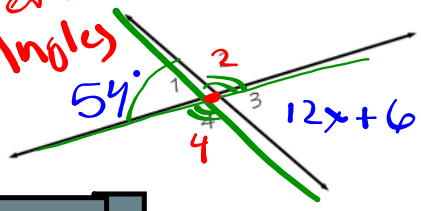
$\boxed{x = 63}$



10. When two lines intersect, four angles are formed.

- The adjacent angles form Linear Pairs and their sum is 180° .
- The non-adjacent angles are called Vertical angles. Vertical angles are always congruent.
- For Vertical angles we can use the equation angle = angle to solve.
  - If the measure of angle 1 is 54 degrees, and the measure of angle 3 can be expressed as $(12x + 6)$, solve for x.

Vertical Angles

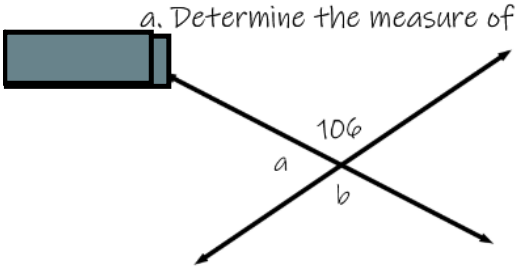


$12x + 6 = 54$

$12x = 48$

$\boxed{x = 4}$

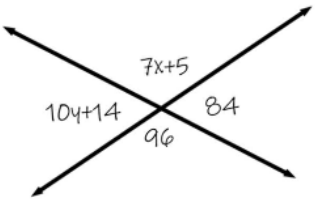
a. Determine the measure of ∠a and ∠b



$\boxed{a = 74}$

$\boxed{b = 106}$

b. Solve for x and y.



$7x + 5 = 96$

$7x = 91$

$\boxed{x = 13}$

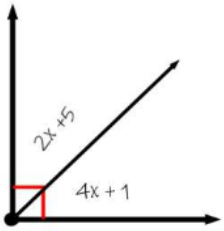
$10y + 14 = 84$

$10y = 70$

$\boxed{y = 7}$

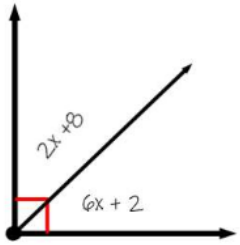
11. When the sum of two angles is 90° we say that they are complementary We can use the[redacted]tion angle + angle = 90 to solve.

a.



$2x+5+4x+1=90$
$6x+6=90$
$6x=84$
$\boxed{x=14}$

b.

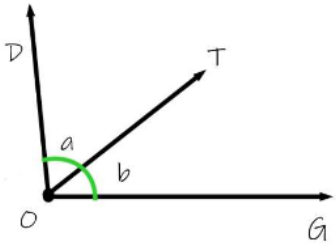


$2x+8+6x+2=90$
$8x+10=90$
$8x=80$
$\boxed{x=10}$

12. When a ray cuts an angle exactly in half it is called an angle bisector.

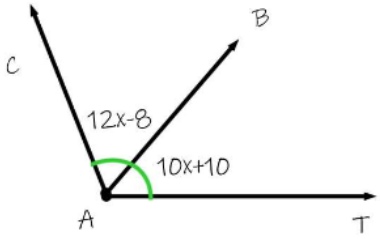
- This creates two equal pieces.

a. ∠DOG is 98 degrees. $\overrightarrow{OT}$ is an angles bisector. Find the measure of ∠a and ∠b. $\boxed{a=49}$ $\boxed{b=49}$



b. $\overrightarrow{AB}$ is and angle bisector. Solve for x.

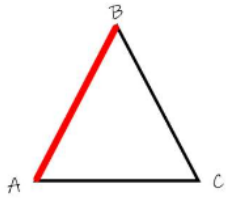
$12x-8=10x+10$
$2x=18$
$\boxed{x=9}$



13. Naming sides of polygons

- The sides of polygons are formed by line segments. To name a side, we use two letters with a bar over them.

A. Name the Left side of the triangle. $\boxed{\overline{AB}}$

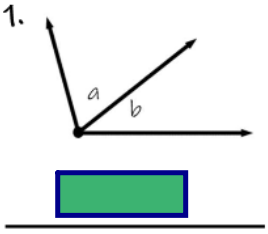


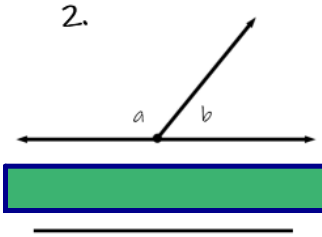
B. Name the top side of the rectangle. $\boxed{\overline{AB}}$

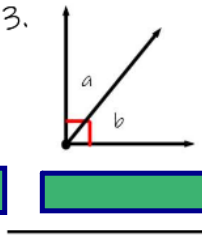
- 286813
- DeltaMath
- Upload Angle Practice to CTLS

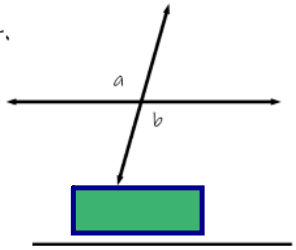
Angles Practice Page

Name the relationship between angle a and angle b.

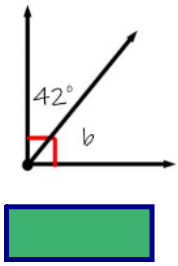
1. 

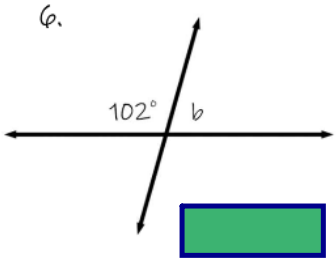
2. 

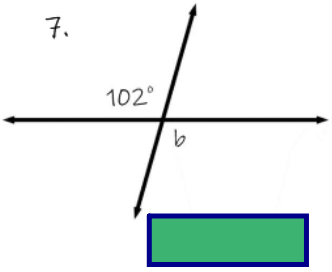
3. 

4. 

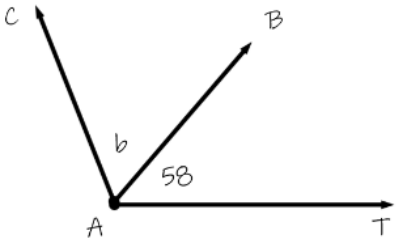
Find the measure of angle b in each diagram.

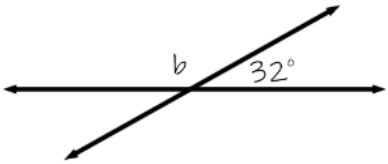
5. 

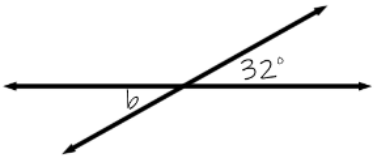
6. 

7. 

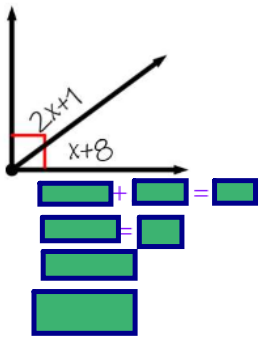
8. Given: $\overrightarrow{AB}$ is an angle Bisector

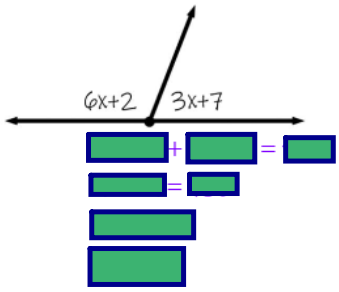


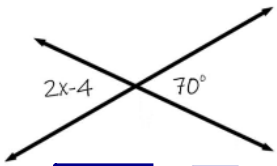
9. 

10. 

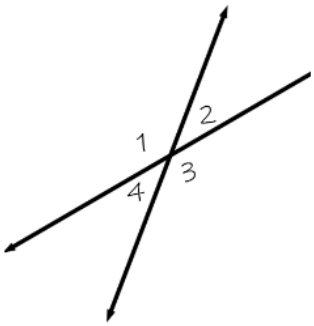
9. Solve for x.

a. 

b. 

c. 

10. Answer the questions using the diagram to the right.



a. Name the two pairs of vertical angles:

b. Name 4 linear pairs:

c. If the measure of angle 1 is 107, what is the measure of angle 2?

d. If the measure of angle 1 is 107, which other angle must also be 107?

Word Problems:

11. Two angles are complementary. The first angle is 5 times the measure of the second angle. Find both angles.

12. Two angles are supplementary. The first angle is 9 less than 2 times the second angle. Find both angles.

13. Two angles are supplementary. One angle is 2/3 the measure of the other one. Find both angles.

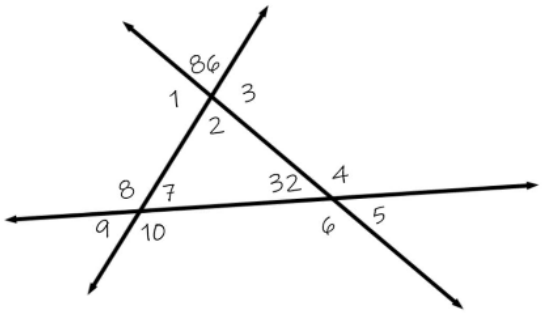
14. Two angles are complementary. One angle is 9 more than twice the other angle. Find both angles.

15. CHALLENGE SECTION: Find the measure of all the numbered angles below.

∠1 = ∠2 =

∠3 = ∠4=

∠5= ∠6=

∠7= ∠8=

∠9 = ∠10 =