

Write your questions here!

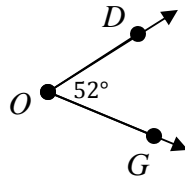
1.3 Measuring Angles

NOTES:

TERM	Name it	Picture
Angle = Two rays with	By its vertex:	
	By a number:	
	By a point on each ray and the vertex:	

$m\angle DOG =$

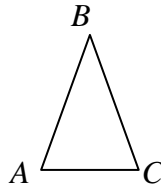
$\angle DOG =$



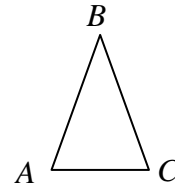
Equal versus Congruent

$m\angle A = 70^\circ$

$m\angle BCA = 70^\circ$

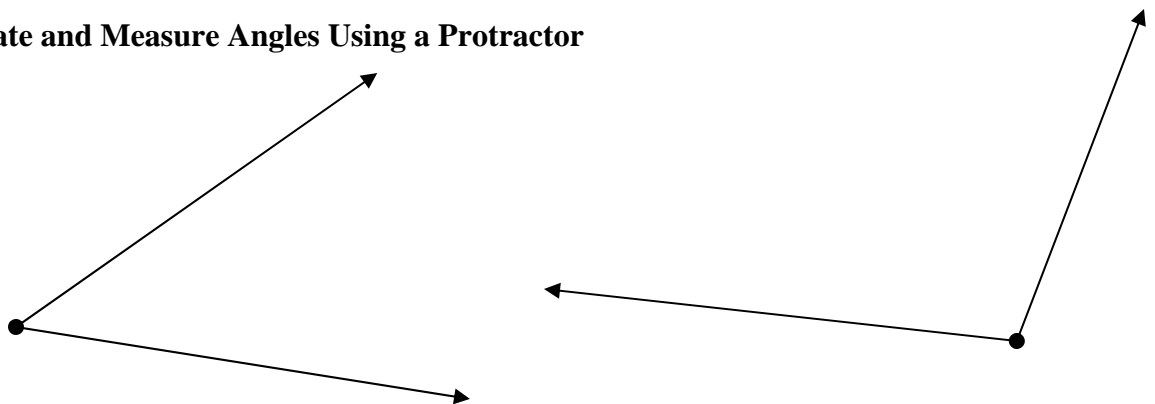


$\angle 1 \cong \angle 2$



$\triangle ABC$ is isosceles

Estimate and Measure Angles Using a Protractor



Classify Angles

Acute Angle	Right Angle	Obtuse Angle	Straight Angle

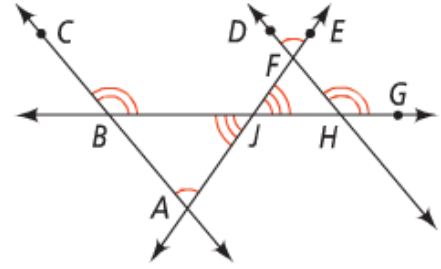
Use the diagram to answer the following:

$$\angle CBJ \cong \blacksquare$$

$$\angle FJH \cong \blacksquare$$

If $m\angle EFD = 75$, then $m\angle JAB = \blacksquare$.

If $m\angle GHF = 130$, then $m\angle JBC = \blacksquare$.



Term	Picture
<p>Angle bisector = A segment, ray, or line that divides an angle into</p>	<p>\overrightarrow{KE} is the angle bisector of $\angle K$</p>

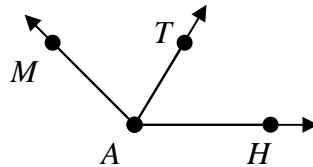
Given

\overrightarrow{AT} is the angle bisector of $\angle MAH$

$$m\angle MAT =$$

$$m\angle TAH = 4x + 20$$

Find x



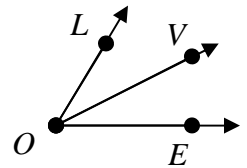
Given

$$\angle LOV \cong \angle VOE$$

$$m\angle LOV = 7x - 14$$

$$m\angle VOE =$$

Find x



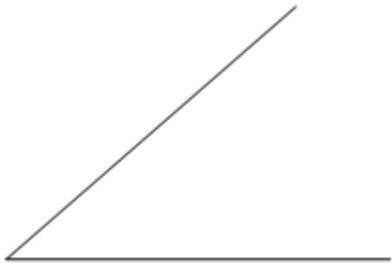
Find $m\angle LOV$

Summarize your notes:

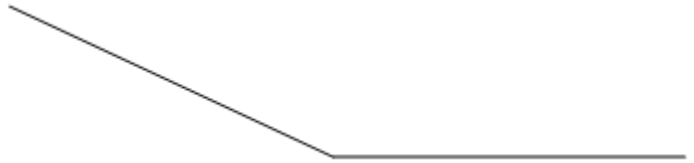
1.3 PRACTICE

Measure the following angles, then classify as acute, right, obtuse, or straight.

1.



2.



Draw a figure that fits each description.

3. an obtuse angle, $\angle RST$

4. a straight angle, $\angle RDM$

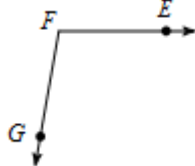
5. a right angle, $\angle RDM$ with an angle bisector of \overline{TD} .

Name the vertex and sides of the angle.

6.

Vertex =

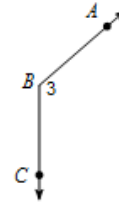
Sides =



7.

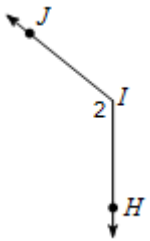
Vertex =

Sides =

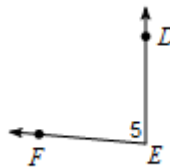


Name the angle four different ways.

8.

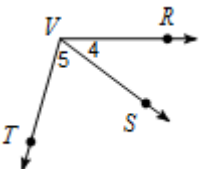


9.

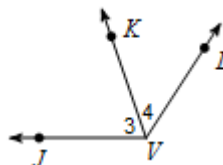


Name all the angles that have V as a vertex.

10.

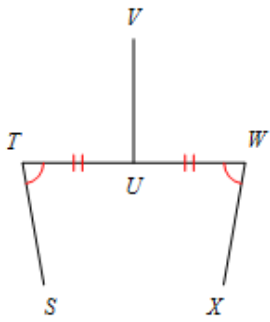


11.

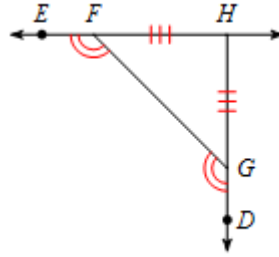


List all the information given by the diagram.

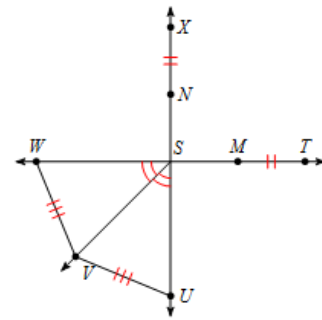
12.



13.



14.

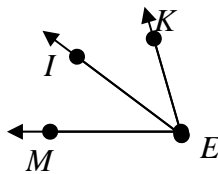


Label the picture and use it to answer the following.

15.

Given

\overrightarrow{EI} is the angle bisector of $\angle MEK$
 $m\angle MEI = 34^\circ$
 $m\angle IEK = 3x + 7$

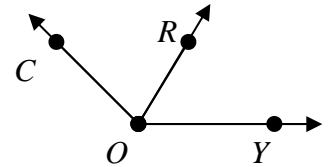


Find x

16.

Given

$\angle COR \cong \angle ROY$
 $m\angle COR = 62^\circ$
 $m\angle ROY = 82 - 4x$

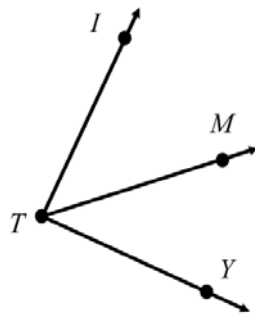


Find x

17.

Given

\overrightarrow{TM} is the angle bisector of $\angle ITY$
 $m\angle ITM = 3x + 15$
 $m\angle MTY = 7x - 13$



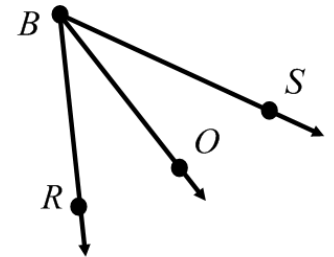
Find x

Find $m\angle MTY$

18.

Given

$\angle RBO \cong \angle SBO$
 $m\angle SBO = 5x + 29$
 $m\angle RBO = 2x + 20$



Find x

Find $m\angle RBO$

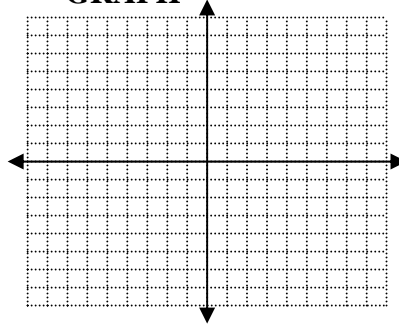
ALGEBRA REVIEW

SOLVE

$$-12 = 10 - 4y$$

GRAPH

$$y = -x - 2$$



MULTIPLY

(distribute)

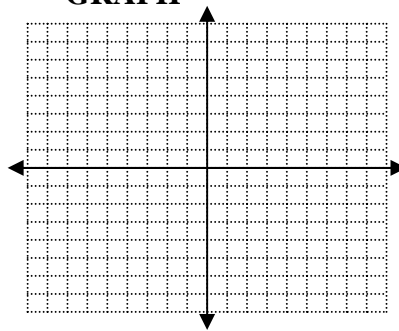
$$5(4x - 3)$$

SOLVE

$$13 - 2y = 5y - 8$$

GRAPH

$$y = -5$$



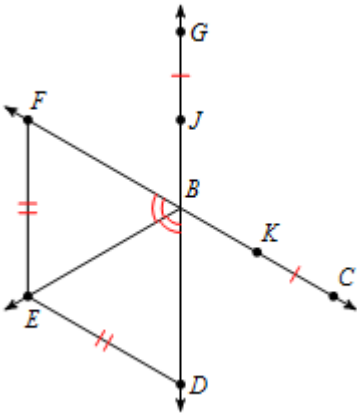
FACTOR

Factor out the greatest common factor (undistribute)

$$10x^2 + 15x$$

1.3 APPLICATION

1. List all the information given by the diagram.



2. Draw the picture, label everything, find x , find $m\angle HAT$

Obtuse angle $\angle CAT$ with angle bisector of \overline{AH}

$$m\angle CAH = 3x + 56$$

$$m\angle HAT = 2x + 60$$

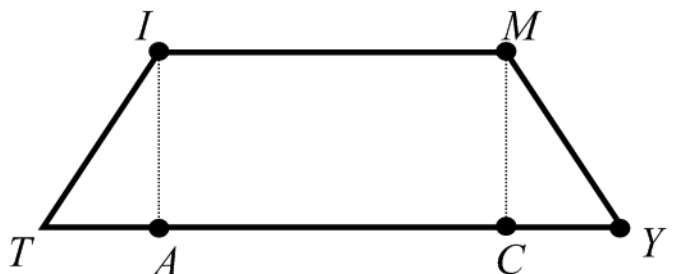
Watch the application walk through video if you need extra help getting started!

3. Geometric Shape

Mr. Kelly loves isosceles trapezoids (below). Help him mark his favorite shape with the following truths:

Isosceles Trapezoid *TIMY*

- a. $\angle ITA \cong \angle MYC$
- b. $\angle TIM \cong \angle IMY$
- c. $\angle IAC$ and $\angle MCY$ are right angles
- d. $\overline{TI} \cong \overline{MY}$
- e. $\overline{AT} \cong \overline{CY}$
- f. $\overline{MI} \cong \overline{CA}$



4. Coordinate Geometry

a. Graph the points

$$T(-4,6)$$

$$R(2,-3)$$

$$I(10,-2)$$

b. Connect the points in order to make a triangle, ΔTRI .

c. Name the obtuse angle.

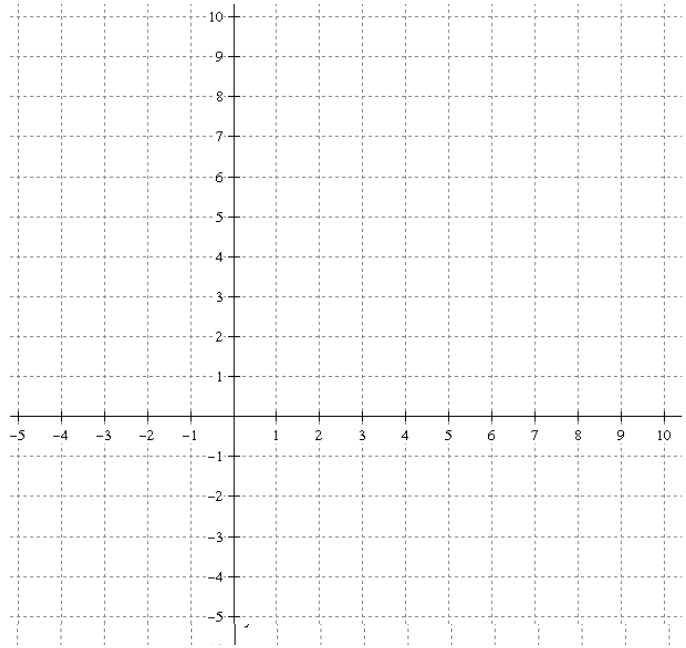
d. Measure the obtuse angle.

e. Find the coordinates of the midpoint of \overline{TI} .

Plot on this point on the graph as point P

f. Draw \overrightarrow{RP} on the graph.

g. If \overrightarrow{RP} was the angle bisector of $\angle TRI$, what would have to be true!



5. Proof

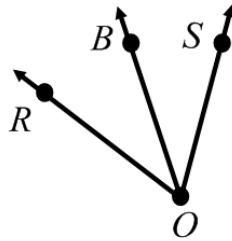
Label the picture and fill in the missing reasons in the two column proof.

Given: \overrightarrow{OB} is the angle bisector of $\angle ROS$

$$m\angle ROB = 35$$

$$m\angle BOS = 4x + 3$$

Prove: $x = 8$



Some possible reasons:

- Given
- Addition Property of Equality
- Subtraction Property of Equality
- Multiplication Property of Equality
- Division Property of Equality
- Substitution
- Distributive Property
- Combine like terms
- Definition of _____
- _____ Postulate
- _____ Theorem

STATEMENT	REASON
1. \overrightarrow{OB} is the angle bisector of $\angle ROS$ $m\angle ROB = 35$ $m\angle BOS = 4x + 3$	1.
2. $\angle ROB \cong \angle BOS$	2.
3. $35 = 4x + 3$	3.
4. $32 = 4x$	4.
5. $8 = x$	5.