

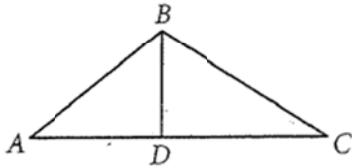
Name: _____ Period: _____ Date: _____

1.5 Measuring and Constructing Angles

All angle measures are in degrees.

- Two angles are _____ when they have the same measure.
- Mark the figure with the given information.

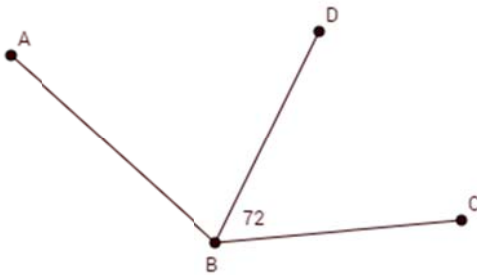
$$m\angle ADB = 90^\circ, AD = BD, \angle DAB \cong \angle DBA$$



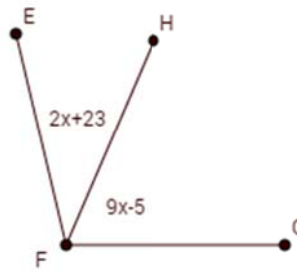
- What is the measure of the angle made by the hands of a clock at 4 o'clock?

- What is the measure of the angle made by the hands of a clock at 3:30?

- $m\angle ABC = 114$, find $m\angle ABD$.

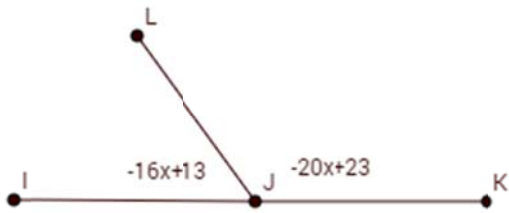


- $m\angle EFG = 95$. Find $m\angle EFH$ and $m\angle HFG$.



- Solve for x. $2|x - 3| = 12$

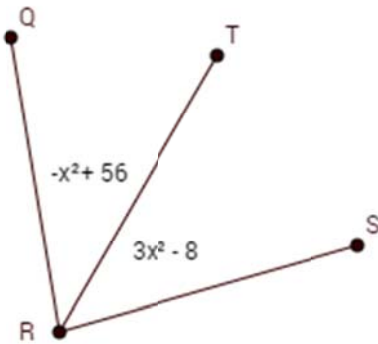
8. $\angle IJK$ is a straight angle. Find $m\angle IJL$ and $m\angle LJK$.



9. $\angle MNO = 90$. Find $m\angle MNP$ & $m\angle ONP$.



10. \overline{RT} is an angle bisector. Find $m\angle QRS$.



11. In $\angle ABC$, \overline{BX} is in the interior of the angle, $m\angle ABX$ is 12 more than 4 times $m\angle CBX$, and $m\angle ABC = 92$.

- Draw a diagram of the situation.
- Find $m\angle ABX$ and $m\angle CBX$.

12. Is it possible for a straight angle to be made up of two obtuse angles? Explain why or why not.

13. Hint: Set up a system of equations. If you do not remember how to solve a system of equations, refer to my video by searching "scevola 2.7". You could also skip to min 6:10 if you just want to see an example.

$$\angle BAC = 3x + 15$$

$$\angle BCA = 5y + 6x$$

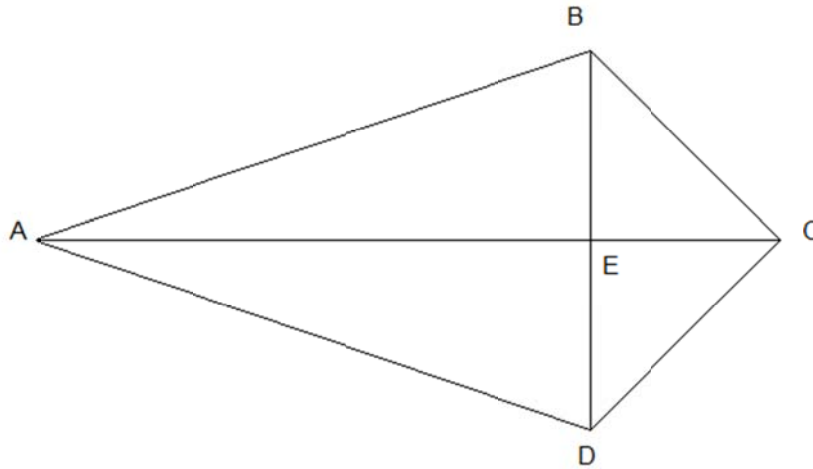
$$\angle DAC = 7y - 1$$

$$\angle DCA = 9x + 4$$

\overrightarrow{AC} bisects $\angle BAD$

\overrightarrow{CA} bisects $\angle BCD$

Find $\angle BCD$

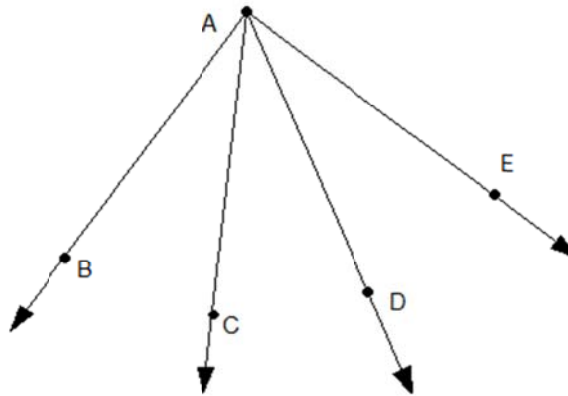


14. \overrightarrow{AC} and \overrightarrow{AD} trisect $\angle BAE$

$$\angle BAD = 6x + 12$$

$$\angle EAB = 9x + 18$$

Is $\angle BAE$ a right angle?



15. Is $\angle 2 \cong \angle 4$?

Justify your answer.

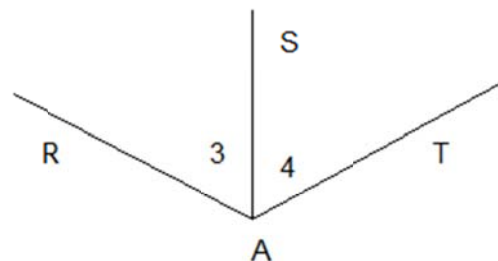
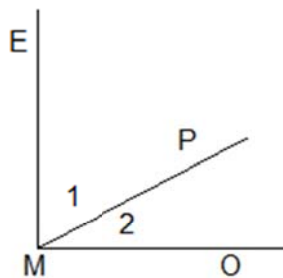
$$\angle 1 = 3x + 10$$

$$\angle 2 = 6x + 8$$

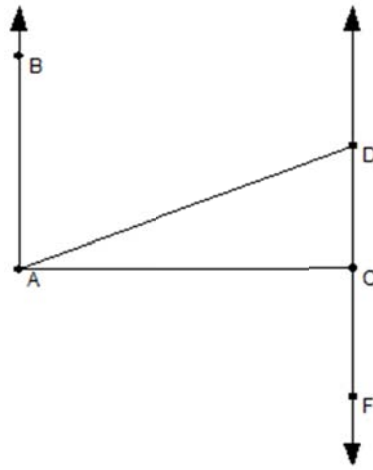
$\angle EMO$ is a right angle

\overrightarrow{AS} bisects $\angle RAT$

$$\angle RAT = 112^\circ$$

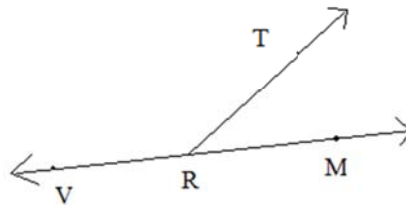


16. Given :
 $\angle ACF$ is a right \angle
 $\angle BAD = 70^\circ$
 $\angle CAD = 20^\circ$
 Prove: $\angle CDA \cong \angle BAD$

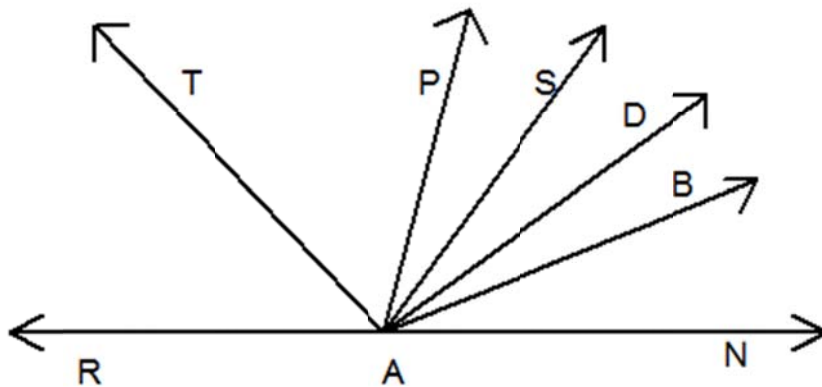


Statements	Reasons

17. The ratio of the measure of $\angle TRV$ to the measure of $\angle TRM$ is 7 to 5. Find $m\angle VRT$



18. Trisect – to divide into three congruent angles.



\overline{AD} & \overline{AS} trisect $\angle BAP$
 \overline{AS} bisects $\angle BAT$
 $m\angle NAB$ is 12° more than
 $m\angle DAB$
 $m\angle TAR = 42^\circ$
 Find $m\angle TAS$