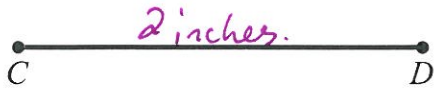
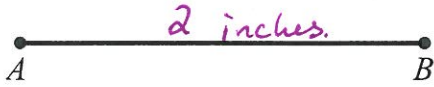
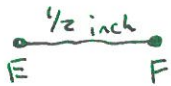


Segment & Angle Measure

Same length (number)
 Equal Segments



no bar $\rightarrow AB = CD$



$AB \neq EF$

Same shape + size
 Congruent Segments

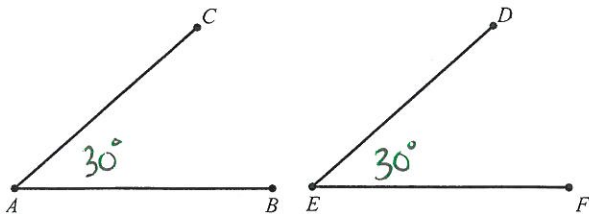


$\overline{AB} \cong \overline{CD}$



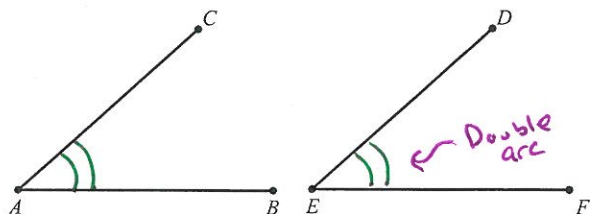
$\overline{AB} \not\cong \overline{EF}$

Equal Angles

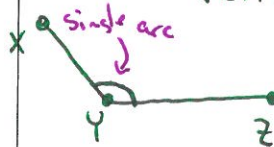


$m\angle CAB = m\angle DEF$

Congruent Angles



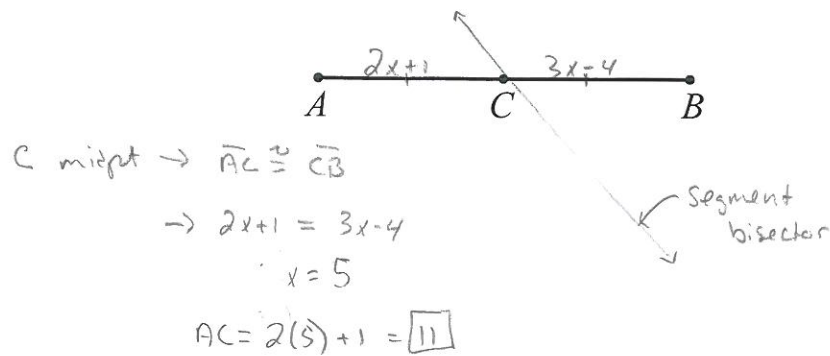
$\angle CAB \cong \angle DEF$



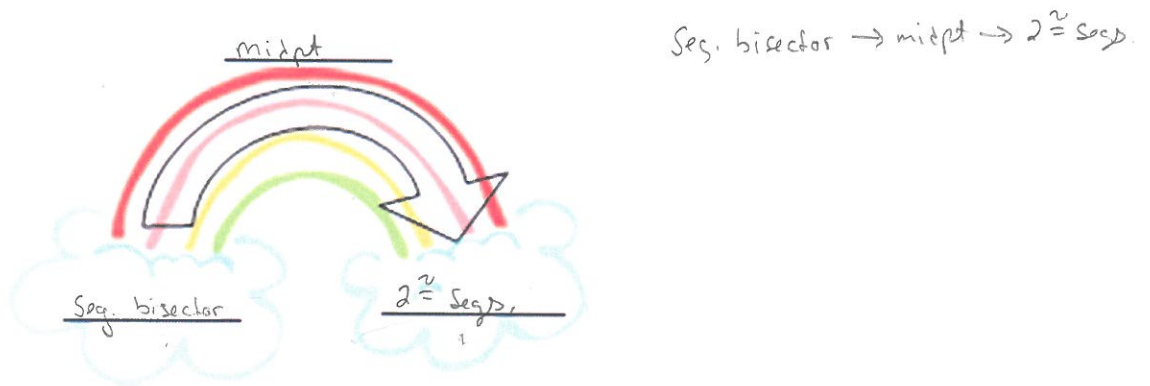
$\angle CAB \not\cong \angle XYZ$

Midpoint: (Definition)

Example: C is midpoint of \overline{AB} . Find AC.

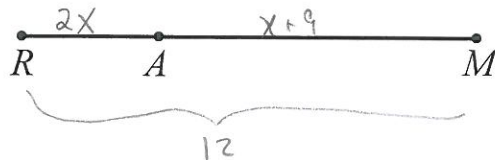


Segment Bisector: (Definition)



Segment Addition: (Def)

Example: $\overline{RM} = 12$ Find RA:
 $\overline{AM} = 3x+9$



$$RA + AM = RM$$

$$2x + x + 9 = 12$$

$$3x + 9 = 12$$

$$3x = 3$$

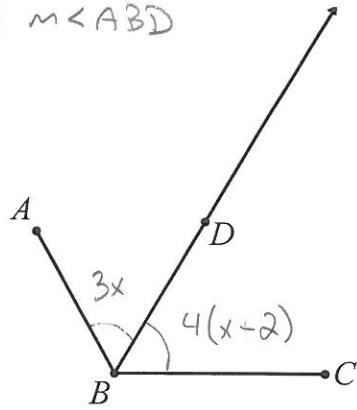
$$x = 1$$

$$RA = 2(1) = \boxed{2}$$

Angle Bisector: (Def)

Example: \overrightarrow{BD} bisects $\angle ABC$

find $m\angle ABD$



\overrightarrow{BD} bisects $\angle ABC \rightarrow \angle ABD \cong \angle DBC$

$$3x = 4(x-2)$$

$$3x = 4x - 8$$

$$8 = x$$

$$m\angle ABD = 3(8) = 24^\circ$$

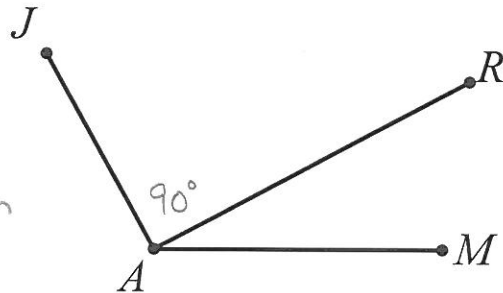
Angle Addition: (Def)

Example: $m\angle JAR = 90^\circ$

$m\angle RAM = 12x - 20$

$m\angle JAM = 106^\circ$

Find $m\angle RAM$.



$$m\angle JAR + m\angle RAM = m\angle JAM$$

$$90^\circ + 12x - 20 = m\angle JAM$$

$$12x + 70 = 106^\circ$$

$$12x = 36^\circ$$

$$x = 3$$

$$m\angle RAM = 12(3) - 20 = 16$$