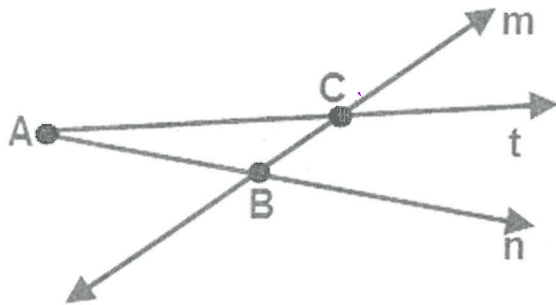


Angles

- Angles are formed by the intersection of two lines, segments, or rays.



1. Name an angle that can be identified using only 1 point.

$\angle A$ $\angle C$

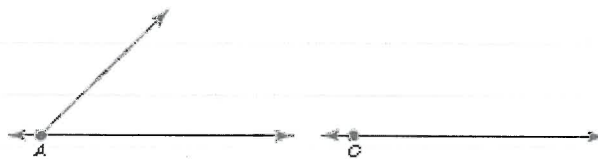
2. Name an angle that must be identified using 3 points.

$\angle ABC$

Construct a Copy of an Angle

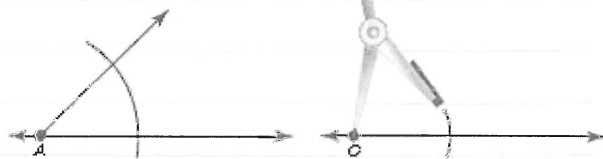
Construct a Starter Line

Use a straightedge to construct a starter line. Label point C on the new segment.



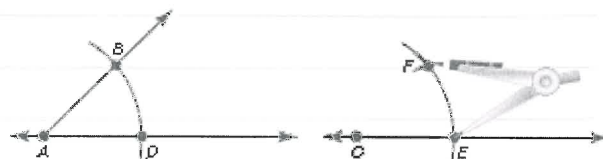
Construct an Arc

Construct an arc with center A . Using the same radius, construct an arc with center C .



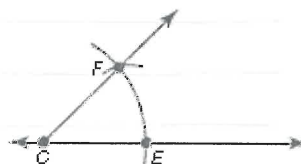
Construct Another Arc

Label points B , D , and E . Construct an arc with radius BD and center E . Label the intersection F .

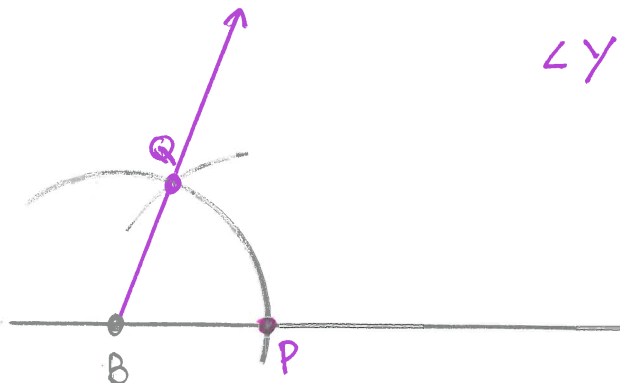
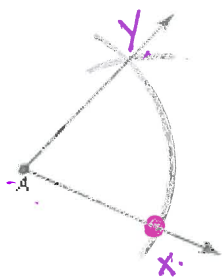


Construct a Ray

Construct ray CF .
 $\angle BAD \cong \angle FCE$.

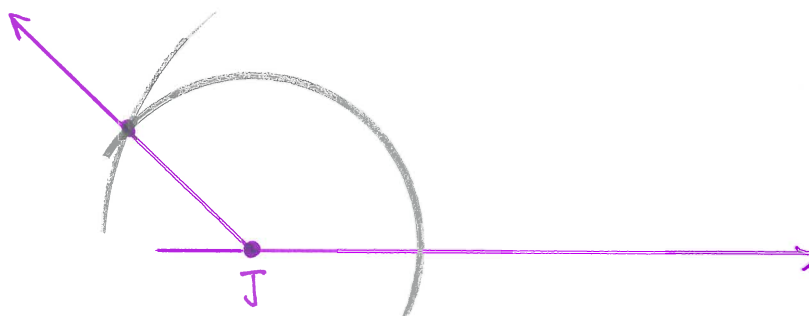
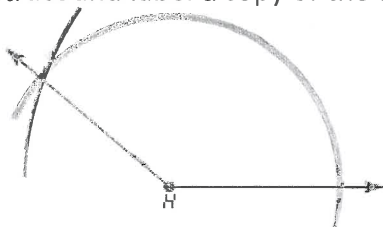


Construct and label a copy of the angle. Write a **congruency** statement about the angles.



$\angle YAX \cong \angle QBP$
or
 $\angle A \cong \angle B$

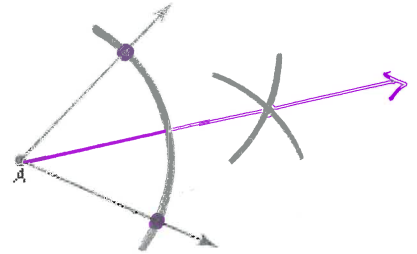
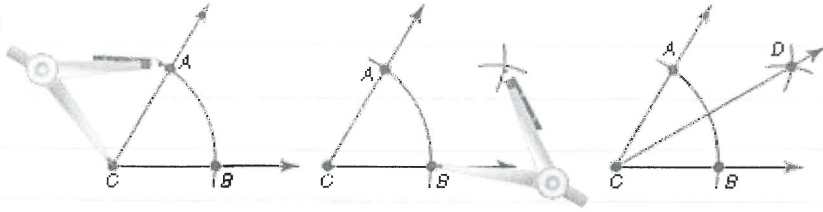
Construct and label a copy of the angle. Write an **equality** statement about the angles.



measure of
 $m\angle H = m\angle J$

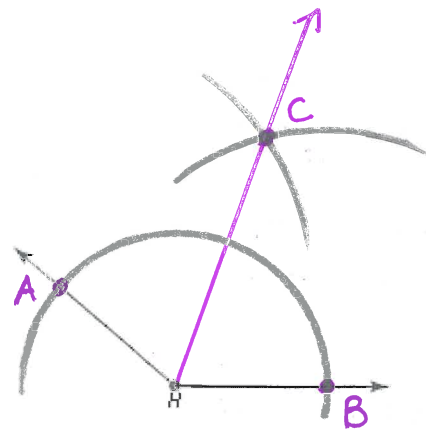
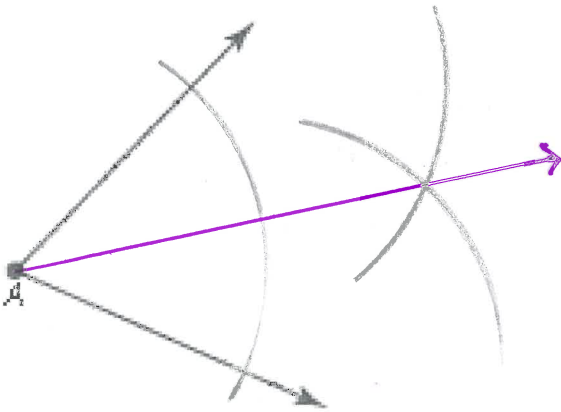
← cuts the \angle into 2 congruent angles

Construct the Bisector of an Angle



<p>Construct an Arc</p> <p>Place the compass at C. Construct an arc that intersects both sides of the angle. Label the intersections A and B.</p>	<p>Construct Another Arc</p> <p>Place the compass at A. Construct an arc. Then, place the compass point at B. Using the same radius, construct another arc.</p>	<p>Construct a Ray</p> <p>Label the intersection of the two arcs D. Use a straightedge to construct a ray through C and D. Ray CD bisects $\angle C$.</p>
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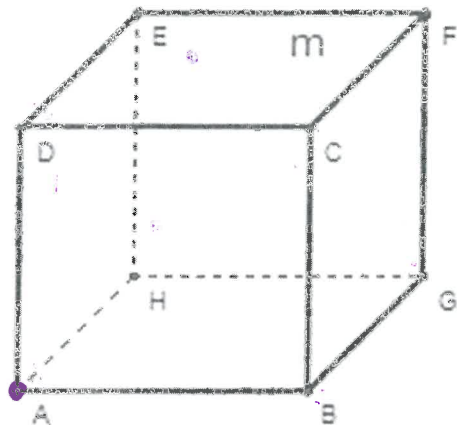
Construct and label the bisector the following angles. Write a congruency or equality statement about the angles formed.



$\angle AHC \cong \angle BHC$
 $m\angle AHC = m\angle BHC$

Planes

- A plane is a "flat surface" that extends in all directions forever.
- A plane can be identified using 3 or more **non-collinear** points that are on the plane or with a single lower case letter.



For example: The "Front" of this box can be identified as Plane ADB or Plane BADC.

1. Name the "top" plane, 3 different ways.

plane EDC
plane m
plane EFDC

2. Name the intersection of planes DEC and EFG.

\overleftrightarrow{EF} or \overline{EF}

3. Name all planes that contain point A.

plane DAB
plane HAD
plane BHA
plane HACF

4. Name all planes that contain both points A and H.

plane DAHE
plane BAHG
plane HACF

5. Name all planes that contain points A, H and B.

plane HABG

6. Name all planes that contain points A, H, B, and C.

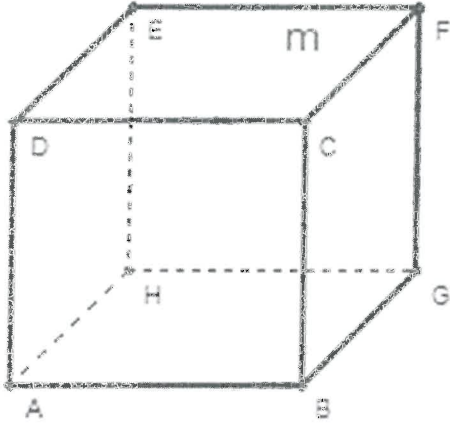
NONE

7. What is the **minimum** number of **non-collinear** points required to form a single, unique plane? Explain.

3 points, 2 points creates too many options.

Coplanar – Lines or points that lie on the same plane.

Skew Lines – Lines that are not coplanar.



8. Determine if the objects are **coplanar** or **skew**. Explain how you know.

a. \overline{DE} and \overline{CF}

Coplanar, they are in the same plane.

b. \overline{DE} and \overline{FG}

Skew. They are in different planes.

c. \overline{DE} and \overline{EH}

Coplanar. they are in the same plane.

d. \overline{DE} and \overline{BG}

Coplanar, they are on the diagonal plane.

9. Explain the difference between two lines being **parallel** and two lines being **skew**.

parallel lines are in the same plane

skew lines are in different planes.

