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UNIT 1A

## AIM: HOW DO WE COPY AN ANGLE?

Do Now:

1. What does it mean for two lines to be parallel? What is the difference between parallel and perpendicular lines? Draw a picture to support your argument.
2. What does the word "congruence" mean?

## HOW TO COPY AN ANGLE

## STEPS

CONSTRUCTION

1. Draw point $A^{\prime}$ underneath the angle and draw ray $A^{\prime} \mathrm{C}^{\prime}$
2. Extend your compass to any width and draw an arc that hits both ray $A B$ and $A C$
3. Without changing the width, move your pointy end down to $A^{\prime}$ and draw the same arc. Mark where it intersects the ray $A^{\prime} C^{\prime}$ as $X$
4. On the original angle, measure the distance between the two intersection points from the arc you drew
5. Without changing the width, place your pointy end on $X$ and draw an arc, such that the two arcs intersect. Label the point of intersection $Y$
6. Connect ray A'Y and you're done!

PRACTICE: Construct congruent angles for the following angle.


PRACTICE: Using your compass and a straightedge:

1. Copy the angle
2. Classify the angle (right, acute, obtuse)

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## CONCLUSIONS:

What construction is this similar to?
What can you conclude about $\Varangle X Q Y$ and $\Varangle W P Z$ ?
We call these $\qquad$ angles. They are formed when two parallel lines are cut by a transveral. Corresponding angles are always $\qquad$ !

1. A) Construct the line that is parallel to line $\overline{A B}$ and passes through point $P$.

B) Identify a pair of corresponding angles.
2. A) Construct the line that is parallel to $m$ and passes through point $P$.
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B) Identify a pair of corresponding angles.
3. A) Construct the line that is parallel to $A B$ and passes through point $P$.

B) Identify a pair of corresponding angles.
