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## AIM: HOW DO WE CONSTRUCT A RECTANGLE AND A SQUARE?

Do Now: List all the properties you know about rectangles and squares below.

| RECTANGLE | SQAURE |
| :--- | :--- |
|  |  |
|  |  |

CONSTRUCTING A RECTANGLE

| STEPS | EXAMPLE |  |
| :---: | :---: | :---: |
| 1. Using your straight edge, extend line AB. |  |  |
| 2. Construct a perpendicular line through point A . |  |  |
| 3. Construct a perpendicular line through point $B$. |  |  |
| 4. Set your compass to a certain width. With the pointy end on A make an arc on the perpendicular bisector. Name it C . | A | B |
| 5. Without changing the width, put the pointy end on $B$ and make the same arc on the perpendicular bisector. Name it D. |  |  |
| 6. Connect C and D. |  |  |

PRACTICE: Given the line segment below, construct a retangle.

STEPS

1. Using your straight edge, draw a secant. Label
the points of intersection A and B
2. Construct a perpendicular line through point
A.
3. Where the perpendicular line intersects the
circle, label it C .
4. Construct a perpendicular line through point
B.
5. Where the perpendicular line intersects the
circle, label it D.
6. Connect C and D .

PRACTICE: Construct a retangle inscribed in a circle


CONSTRUCTING A SQUARE

| STEPS | EXAMPLE |
| :--- | :--- |
| 1. Extend AB to the right. |  |
| 2. Construct a perpendicular line through point |  |
| B. |  |
| 3. Measure the distance between A and B in your |  |
| compass, do not change the width. |  |
| 4. Draw an arc above point B (on the |  |
| perpendicular line). Name it C. |  |
| 5. Draw an arc above point A. |  |
| 6. With the pointy end on C, make an X with the |  |
| arc above A. Label it D |  |
| 7. Connect A, B, C and D. |  |

PRACTICE: Given the line segment below, construct a square.


## CONSTRUCTING AN INSCRIBED SQUARE

STEPS

| 1. Using your straight edge, draw a diameter. Label |
| :--- |
| the ends A and B . |
| 2. Construct a perpendicular line through the center. |
| 3. Where the perpendicular line intersects the circle, |
| label them C and D . |
| 4. |
| Connect $\mathrm{A}, \mathrm{B}, \mathrm{C}$ and D . |

PRACTICE: Construct a square inscribed in the circle below.


