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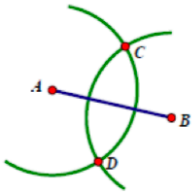
**1. Which geometric instrument would I use to measure the length of a segment, the compass or the straightedge? Explain your answer.**

To measure the length of a segment use a compass.
The compass holds the exact length of a segment when held at its 2 endpoints.

**2. What is the difference between drawing and constructing something? So for example, what is the difference between drawing a perpendicular line and constructing a perpendicular line?**

Drawing is a free hand sketch.
A construction is using geometric tools (compass and straight edge) to get a precise representation.

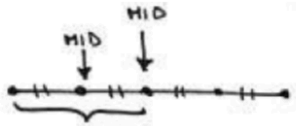
**3. A student has done the following construction. What was this student attempting to construct? Is there more than one thing that the student could be constructing? Explain.**




- perpendicular line
- bisector
- midpoint
- rhombus
- isosceles triangle

**4. After learning the midpoint construction, Sally realizes that she could determine one-fourth the length of a segment. How could she do this? Explain & Diagram.**

Sally can find the midpoint again.



5. When given $\overline{AB}$ & $\overline{CD}$, a student uses her compass to measure them and then construct a new length EF. What is the exact length of $\overline{EF}$ ? AB - 2CD

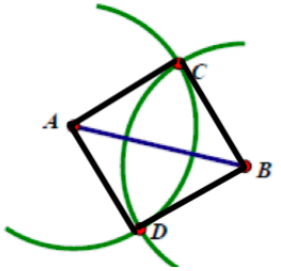


6. A teacher instructs the class to construct the midpoint of a segment. Jeff pulls out his ruler and measu the segment to the nearest millimeter and then divides the length by two to find the exact middle of the segment. Has he done this correctly?

A ruler is NOT used for constructing so Jeff did not do it correctly.

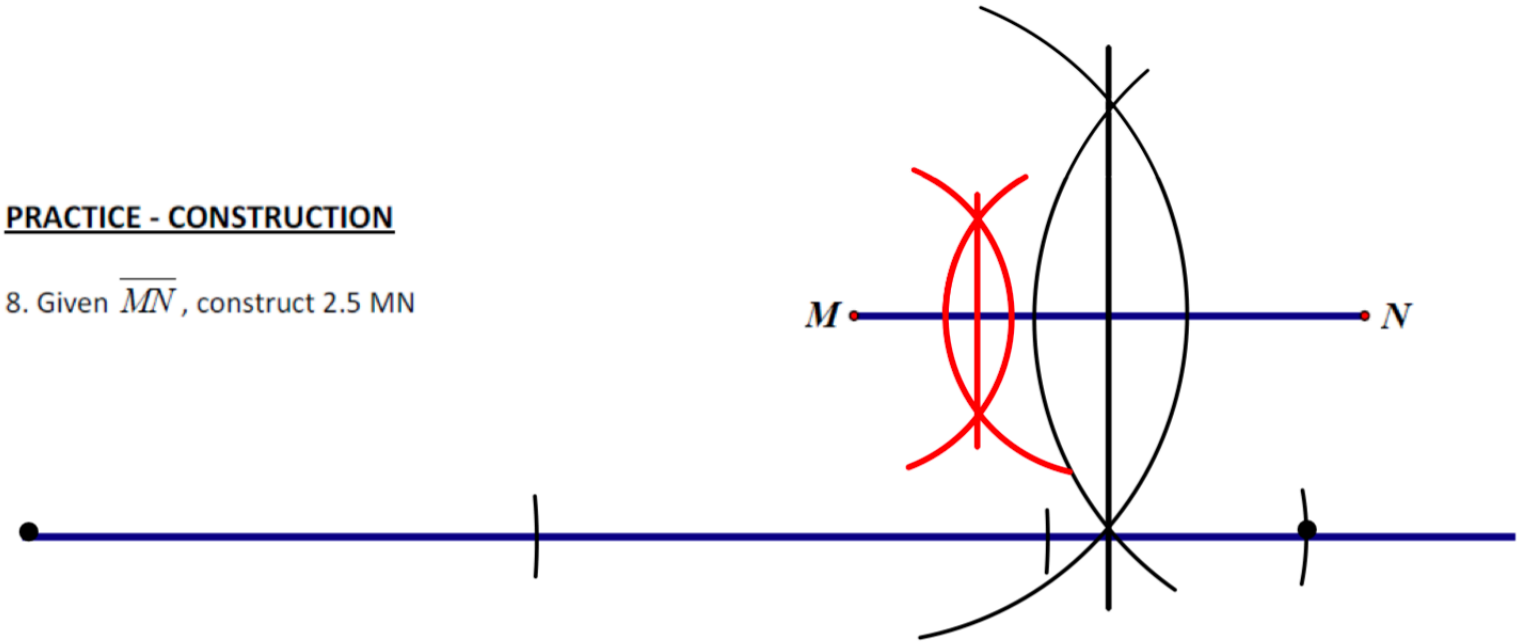
7. A rhombus is a quadrilateral with 4 congruent sides. Hidden in this construction is a rhombus, can you find it and then explain why it MUST be a rhombus.

In a circle, radii of congruent circles are congruent. Therefore the 4 segments drawn are all congruent to each other.

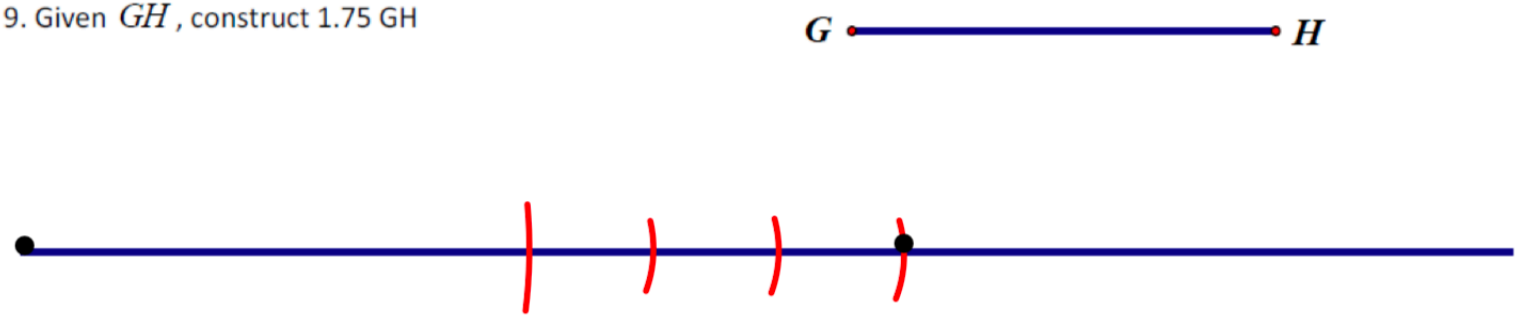


**PRACTICE - CONSTRUCTION**

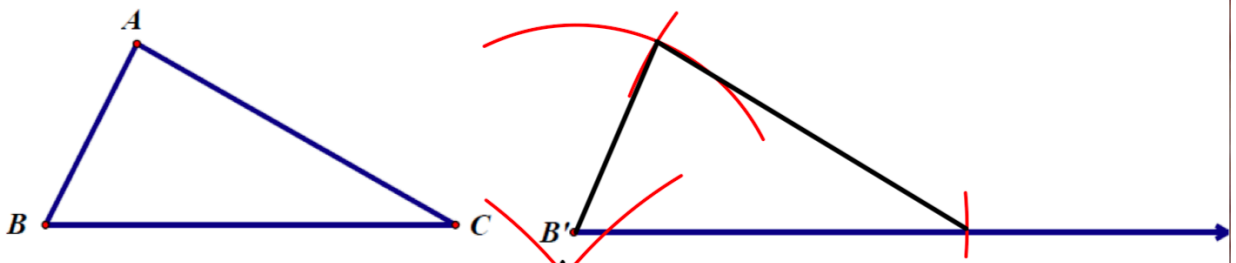
8. Given $\overline{MN}$, construct 2.5 MN




9. Given $\overline{GH}$, construct 1.75 GH



10. Given ΔABC, construct a copy of it, ΔA'B'C'.




11. Given $\overline{VB}$ -- perform the midpoint construction. What other construction did you just perform?