BECA / Dr. Huson / Geometry 02-Midpoint+distance   Name:
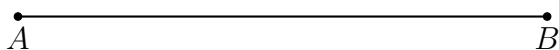pset ID: 17

2-2HW-Midpoint-calcs

1. Complete the construction of a perpendicular bisector and fill in the blanks in the steps.

    (a) Given the line segment $\overline{AB}$.

    (b) Construct circle A with radius AB.

    (c) Construct circle _____ with radius AB.

    (d) Label the intersections of the two circles P and Q.

    (e) Draw line _____.

    (f) Label the intersection of $\overline{AB}$ and $\overleftrightarrow{PQ}$ as point M.

    (g) M is the midpoint of $\overline{AB}$ and $\overline{AB} \perp \overleftrightarrow{PQ}$

2. Given line segment $\overline{AB}$ with midpoint M, that is, $\overline{AM} \cong \overline{BM}$. $AB = 11.8$. Find the length of $\overline{AM}$.

A————————————————M————————————————B

3. Given $\overline{AMB}$, M bisects $\overline{AB}$, $AM = 2x - 10$, $BM = x + 2$. Find AB. Complete all the steps for full credit.

    (a) Sketch and label the situation

    (b) Write an equation

    (c) Solve for x

    (d) Answer the question

    (e) Check your solution

4. Given that S bisects $\overline{RT}$. $RT = 7x - 3$, $ST = 2x + 6$. Find RT. Complete all the steps for full credit.