Homework: Treasure Map Problem

1. On a blank sheet of paper:
   a. Choose two points P and Q, and draw the segment PQ.
   b. Following the instructions on the Treasure Map, choose a point $W_1$.
   c. Using a straight-edge and compass (preferred), or a ruler and protractor, locate the points $X_1$ and $Y_1$ as described in the problem.
   d. Using the same tools, locate the midpoint $T_1$ of the segment $X_1Y_1$, where the treasure is buried.

2. On the drawing for part 1 above, choose another point $W_2$. Repeat 1, locating the points $X_2$, $Y_2$, and $T_2$. Describe what you observe about the two points $T_1$ and $T_2$.

3. List at least two “clever” places to put the point W that might help you to figure out why the choice of W does not affect the location of T.