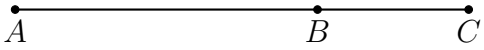
2.9 Homework: Calculations in geometry

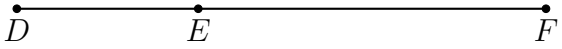
1. Given $\overline{ABC}$, $BC = 36.9$, and $AC = 87.3$.

   Find AB.

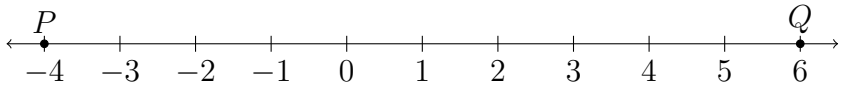


2. Given $\overline{DEF}$, $DF = 75$ and $\overline{DE}$ is twice the length of $\overline{EF}$.

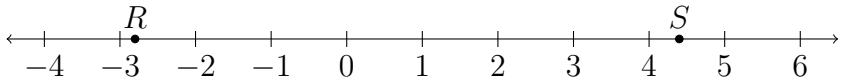
   Find DF.



3. Given $\overleftrightarrow{PQ}$ as shown on the number line. Divide segment $\overline{PQ}$ into five congruent segments by marking and labeling the points R, S, T, and U on the numberline.

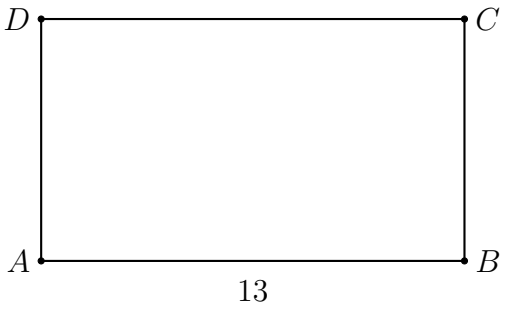


4. Given $\overleftrightarrow{RS}$ as shown on the number line, with $R = -2.8$ and $S = 4.4$.

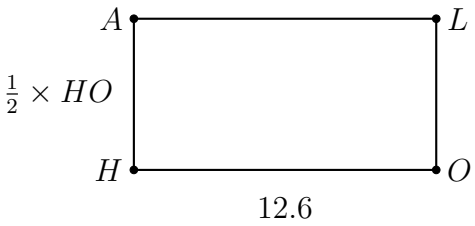


   The points T and U trisect $\overline{RS}$. Find their values, and mark and label them on the numberline.

5. The rectangle $ABCD$, shown below, has a perimeter of 42, and $AB = 13$. Find the area of the rectangle.



6. Given the rectangle $HOLA$ shown below, with length $HO = 12.6$. The width AH is one-half of the length HO. Find the perimeter of the rectangle.



7. In the following two problems, solve for the value of x.

   (a) $\frac{2}{7}(16x + 5) = 10\frac{4}{7}$

   (b) $x^2 - 8x - 9 = 0$