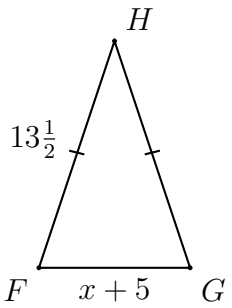
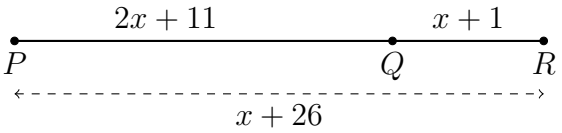
1.5 Homework: Segments, equilateral and isosceles triangles, perimeter

1. The perimeter of the isosceles $\triangle FGH$ is 35 with $\overline{FH} \cong \overline{GH}$. If $FG = x + 5$ and $FH = 13\frac{1}{2}$, find x.

   Show your work with an equation for full credit.



2. Given $\overline{PQR}$, $PQ = 2x + 11$, $QR = x + 1$, $PR = x + 26$. Find x.

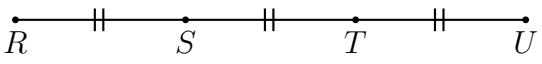


   (a) Write down an equation to represent the situation.

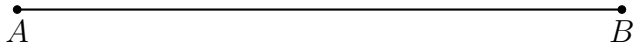
   (b) Solve for x.

   (c) Check your answer.

3. Given the points S and T trisect the line segment $\overline{RU}$, as shown below. If $RT = 7$, find RU.



4. The point Q lies on $\overline{AB}$ three quarters of the way from A to B. Given $AB = 28$.
   (a) Mark and label the approximate location of Q.
   (b) Find AQ. State an equation for full credit.



5. Given $\overline{DEF}$, $DE = 3\frac{1}{3}$, and $EF = 1$. Find DF.