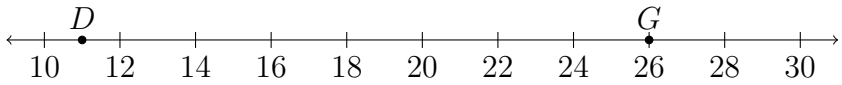
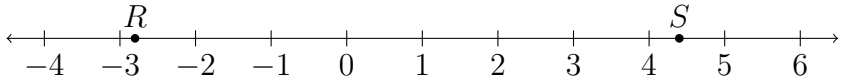
1.7 Extension Quiz: Absolute value, trisection, algebra

1. Given $\overleftrightarrow{DG}$ as shown on the number line, with $D = 11$ and $G = 26$.



Points E and F trisect $\overline{DG}$. Find the values of E and F and mark and label them on the number line $\overleftrightarrow{DG}$.

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

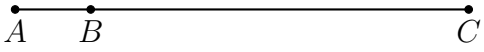


The points T and U trisect $\overline{RS}$. Find their values, and mark and label them on the number line.

3. Given $\overline{PQR}$, with $PQ = \frac{1}{2}x + 4$, $QR = x + 3$, and $PR = 2x + 5$. Find PR. Complete all the steps for full credit.

4. Given $\overline{ABC}$, $AB = \frac{2}{3}$, and $AC = 3\frac{1}{3}$.

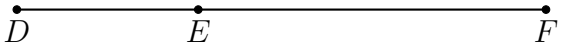
   Find BC.



5. Given $\overline{PQR}$, with $PQ = 4x - 4$, $QR = 2x + 3$, and $PR = 5x + 9$. Find PR. Complete all the steps for full credit.

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

   Find DE.



7. 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.