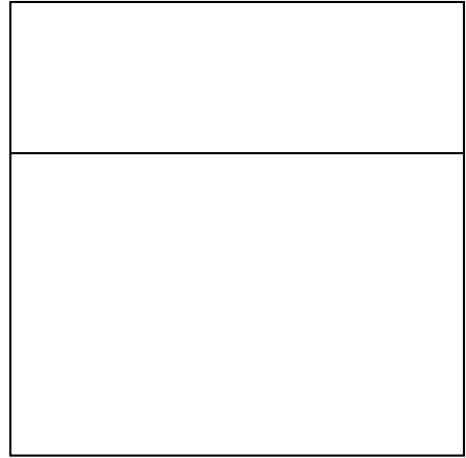


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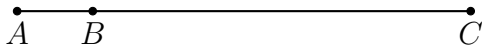
1.8 Extension: Area and perimeter

1. A square is partitioned into two rectangles. The sum of the perimeters of the two rectangles is 36. Find the area of the square.



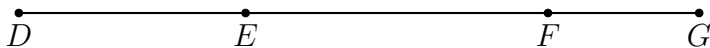
2. Given \overline{ABC} , $AB = \frac{2}{3}$, and $AC = 3\frac{1}{3}$.

Find BC .



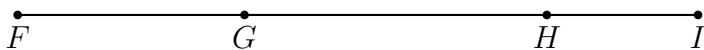
3. Given \overline{DEFG} , $DE = 3\frac{1}{4}$, $EF = 6\frac{1}{4}$, and $FG = 1\frac{3}{4}$. (diagram not to scale)

Find DG , expressed as a fraction, not a decimal.



4. Given \overline{FGHI} , $FG = 8\frac{1}{6}$, $GH = 12\frac{1}{3}$, and $HI = 5\frac{1}{2}$. (diagram not to scale)

Find FI .

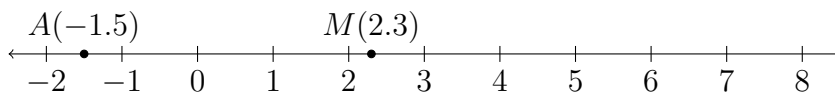


5. Given \overleftrightarrow{JK} as shown on the number line.



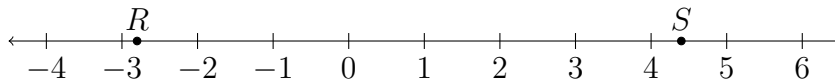
What is the midpoint between the points J and K ?

6. The point $M(2.3)$ is the midpoint of segment \overline{AB} . Given $A(-1.5)$, find the value of B . Mark and label it below.



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7. 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.

8. Given \overline{PQR} , with $PQ = \frac{1}{2}x + 4$, $QR = x + 3$, and $PR = 2x + 5$. Find PR .

9. Given \overline{PQR} , with $PQ = 4x - 4$, $QR = 2x + 3$, and $PR = 5x + 9$. Find PR .

10. 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.

