

Geometry Unit 1: Extra slides for Segments, Length, and Area

Bronx Early College Academy

Christopher J. Huson PhD

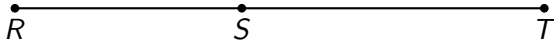
8-23 September 2022

Extra 1.1 Segment addition

Sandbox

Segment addition with fractions

Do Now: Given \overline{RST} , $RS = 3\frac{2}{3}$, and $RT = 9\frac{1}{3}$. Find ST .



Mark the diagram and state your answer as a fraction

Given \overline{RST} , $RS = 3\frac{2}{3}$, and $RT = 9\frac{1}{3}$. Find ST .

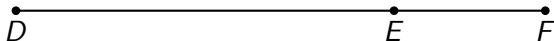


Solution

Apply the Segment Addition Postulate

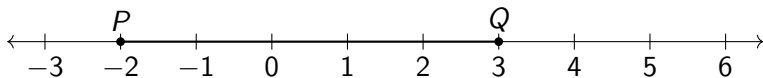
Show your work by marking the diagram and writing an equation.

Given \overline{DEF} , $DE = 8.5$, and $EF = 2.5$. Find DF .



Find the length of the line segment \overline{PQ} .

Given $P(-2)$ and $Q(3)$, as shown on the number line.

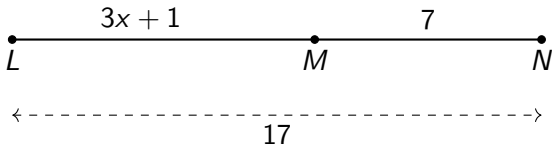


State an equation and the solution.

Check your work by counting the distance. Leave marks to show your work.

Segment addition practice

Do Now: Given \overline{LMN} , $LM = 3x + 1$, $MN = 7$, $LN = 17$. Find x .



1. Write down an equation to represent the situation.
2. Solve for x .
3. Check your answer.

Midpoint example

Given M bisects \overline{AB} , $AM = 5x + 2$, $MB = 20$.

1. Mark the diagram with the values and tick marks
2. Write an equation and solve for x
3. Check your result



Solve for x given a bisector

Given M is the midpoint of \overline{AB} , $AM = 5x + 2$, $MB = 20$.

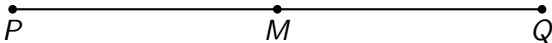
1. Mark the diagram with the values and tick marks
2. Write an equation and solve for x
3. Check your result



Segment bisector example

Given M bisects \overline{PQ} , $PM = x + 7$, $PQ = 23$.

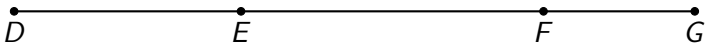
1. Mark the diagram with the values and tick marks
2. Write an equation and solve for x
3. Check your result



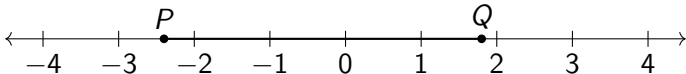
Fraction and negatives+decimals practice problems

1. Do Now: 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.



2. Given $P(-2.4)$ and $Q(1.8)$, as shown on the number line. Find the length of the line segment \overline{PQ} .



Sandbox

- (i) one
- (ii) two
- (iii) three

| | | |
|---------------|----|----|
| box goes here | xx | yy |
|---------------|----|----|

- T F one
- T F two
- T F three

End point The point at the end of a line segments

Line An infinite number of points extending in both directions forever

Definition

A **prime number** is a number that has exactly two divisors.