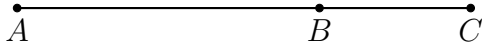


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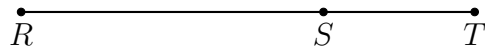
1.2 Classwork: Solve for length

1. Given \overline{ABC} , $AB = 8$, and $BC = 4$. Find AC .



2. Given \overline{RST} , $RS = 5$, and $RT = 7\frac{1}{2}$.

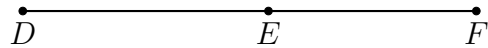
(a) Find ST .



(b) The postulate used in this problem is the _____.

3. Given \overline{DEF} , $DE = x + 4$, $EF = x + 2$, $DF = 14$. Find DE .

(a) Label the diagram with the given values.



(b) Write an equation:

(c) Solve for x

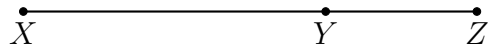
(d) Answer the question.

Find DE by substituting for x .

(e) Check your answer

4. The points shown are in a straight line, \overline{XYZ} .

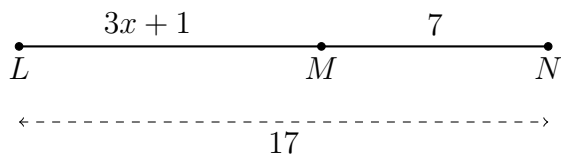
- (a) Measure and label the lengths XY and YZ to the nearest centimeter.



- (b) Write an equation employing the Segment Addition Postulate.
(fill in the blanks with values in centimeters)

$$XZ = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

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



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

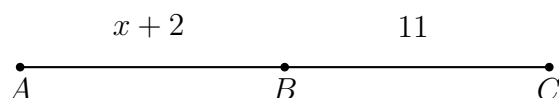
- (b) Solve for x .

- (c) Check your answer.

Name:

6. Given point B is the midpoint of \overline{AC} , with $AB = x + 2$, $BC = 11$.

First write an equation representing the situation, then find x .



7. Find the value of each expression.

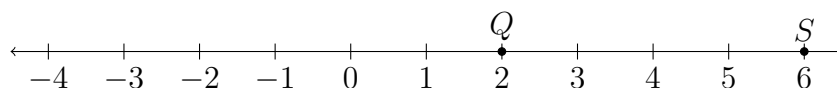
(a) $|11| =$

(c) $|-4.75| =$

(b) $|-7| =$

(d) $|10 - 7| =$

8. Given \overleftrightarrow{QS} as shown on the number line.

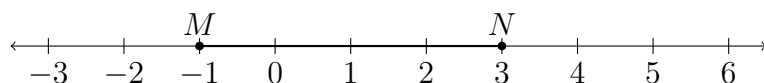


- (a) In the given number line units, what is the distance between Q and S ?

$QS =$

- (b) Mark the point R , the midpoint of \overline{QS} .

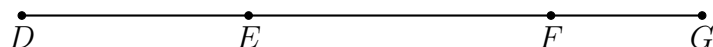
9. Given \overline{MN} with $M(-1)$ and $N(3)$, as shown on the number line.



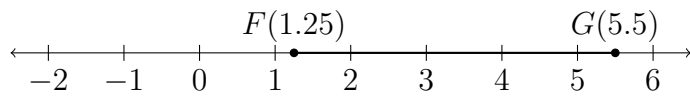
What is the length of the segment \overline{MN} ? Show your work as an equation.

10. Given \overline{DEFG} , $DE = 3\frac{1}{2}$, $EF = 7\frac{1}{2}$, and $FG = 2\frac{1}{2}$. (diagram not to scale)

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



11. Given \overline{FG} as shown. What is the distance on the number line between the points?



12. Given \overline{RST} , $RS = 3\frac{2}{3}$, and $RT = 9\frac{1}{3}$. Find ST (expressed as a fraction, not a decimal).

