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Unit 1- Worksheet \#2: Use Segments and Congruence

1. Explain what $\overline{M N}$ means and what $M N$ means


Find the indicated length.
2. Find $M P$

3. Find $U W$

4. Find $B C$

5. Error Analysis: In the figure at the right, $\mathrm{AC}=14$ units and $\mathrm{AB}=9$ units. Describe and correct the error made in finding BC.


In exercises 6-7, plot the given point in a coordinate plane. Then determine whether the line segments named are congruent.
6. $A(0,1), B(4,1), C(1,2), D(1,6)$ $\overline{A B}$ and $\overline{C D}$

7. $J(-6,-8), K(-6,2), L(-2,-4), M(-6,-4)$ $\overline{J K}$ and $\overline{L M}$


Use the number line to find the indicated distance.

8. JK
9. JL
10. JM
11. KM

In the diagram, points $\mathrm{V}, \mathrm{W}, \mathrm{X}, \mathrm{Y}$ and Z are collinear, $V Z=52$ units, $X Z=20$ units and $W X=X Y=Y Z$. Find the indicated length.
12. WX
13. VW
14. WY
15. VX

16. WZ
17. VY
18. Use the diagram. What is the length of $\overline{E G}$ ? Show your work.
A. 1 unit
B. 4.4 units
C. 10 units
D. 16 units

19. Point S is between R and T on $\overline{R T}$. Use the information below to write an equation in terms of $x$. Solve the equation. Then find RS and ST. (It may be helpful to draw it out)

$$
\begin{aligned}
& R S=2 x+10 \\
& S T=x-4 \\
& R T=21 .
\end{aligned}
$$

20. In 2003, a remote-controlled model airplane became the first ever to fly nonstop across the Atlantic Ocean. The map shows the airplane's position at three different points during its flight.

a.) Find the total distance the model airplane flew.
b.) The model airplane's flight lasted nearly 38 hours. Estimate the airplane's average speed. ( $d=r t$ )
