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## What happened to the guy who lost his left side?

Solve each problem and find your solution below. Cross out the box containing that solution. When you finish, write the letters for the remaining boxes in the spaces at the bottom of the page. . Show your work on a separate sheet of paper $;$

1. Given point $C(-2,4)$ and $D(-6,12)$, please find $C D$.

## Use the following information for questions 2 and 3.

Sally wants to plant a tree at the midpoint of a path in the park. The coordinates of the endpoints of the path are $(-6,8)$ and $(4,-2)$.
2. Where should Sally plant the tree?
3. Sally cannot bring her truck on the path, so she must carry the tree to plant it. How far along the path must she carry the tree to arrive at the planting spot? Each grid on the coordinate plane represents 10 feet. (Round your answer to the nearest tenth.)
4. Given the diagram, please find $L N$.

5. $X(-2,5)$ and $Y(6,-1)$ are both on $\overline{X Z}$. $Y$ is the midpoint of $\overline{X Z}$. Please find the coordinates for point $Z$.
6. $\angle A B C$ is bisected by $\overrightarrow{B D}$. If $m \angle A B D=(4 x)^{\circ}$ and $m \angle A B C=112^{\circ}$, please find $m \angle D B C$.
7. Given $\overrightarrow{B D}$ is an angle bisector for $\angle A B C$, please find $m \angle A B C$.

8. Given the diagram please solve for $x$.

9. $\angle A B D$ is a straight angle. Please find $\mathrm{m} \angle A B C$.

10. $B$ is between $A$ and $C$. If $A B=3 \mathrm{x}, B C=\mathrm{x}$, and $A C=20$, what is the value of $x$ ?
11. Please find the measures of the four angles shown.



