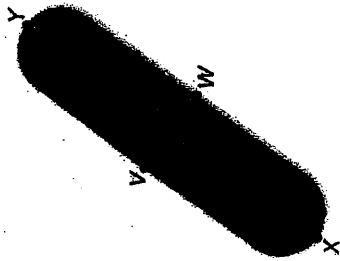


Using Midpoint Formulas

Example 1: Finding Segment Lengths

In the skateboard design, \overline{VW} bisects \overline{XY} at point T , and $XT = 39.9$ cm. Find XY .

$XY =$ _____



Example 2:

\overline{MT} bisects \overline{PQ} at point M , and $PM = 1.8$ mm. Find PQ .

$PQ =$ _____



Example 3:

Point M is the midpoint of \overline{AB} . Find the length of AB . Show all work.

$AB =$ _____

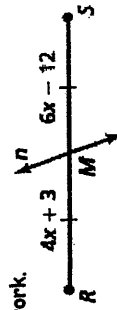


Example 4:

Identify the segment bisector of \overline{RS} . Then find RS . Show all work.

Segment Bisector = _____

$RS =$ _____



Example 5: Finding the Midpoint

The endpoints of \overline{RS} are $R(1, -3)$ and $S(4, 2)$. Find the coordinates of the midpoint M . Draw and label the diagram. Show all work.

$M =$ _____

Example 6:

The endpoints of \overline{CD} are $C(-4, 3)$ and $D(-6, 5)$. Find the coordinates of the midpoint M . Draw and label the diagram. Show all work.

$M =$ _____

Example 7:

The midpoint of \overline{JK} is $M(2, 1)$. One endpoint is $J(1, 4)$. Find the coordinates of endpoint K . Draw and label the diagram. Show all work.

$K =$ _____

Example 8:

The midpoint of \overline{VW} is $M(-1, -2)$. One endpoint is $W(4, 4)$. Find the coordinates of endpoint V . Draw and label the diagram. Show all work.

$V =$ _____

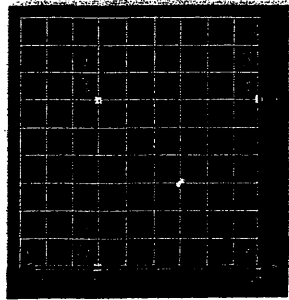
Example 9:

Your house and the theater are 18 kilometers apart on the same straight road. You need to stop at the bank so you can get gas on the way to the theater. The gas station is halfway between your house and the theater. The bank is $\frac{2}{3}$ of the way to the gas station. Draw a sketch to represent this situation. Mark the locations of your house, the bank, the gas station, and the theater. How far is the bank from your house?

Distance = _____

Example 10:

The figure shows a coordinate plane on a baseball field. The distance from home plate to first base is 90 feet. The pitching mound is the midpoint between home plate and second base. Find each measure. Show all work.



a. The distance from home plate to second base

Distance = _____

b. The distance between home plate and the pitching mound

Distance = _____

c. The coordinates of the midpoint between the pitching mound and second base

Coordinates = _____