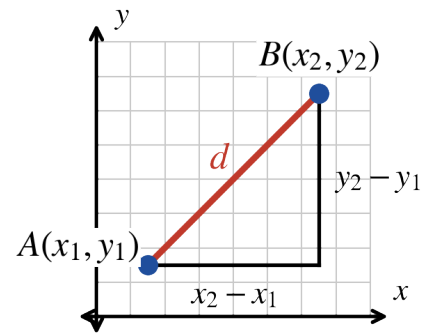


Speak Like A Mathematician:

midpoint:

segment bisector:



The Midpoint Formula:

The Distance Formula:

Example 1 - Complete the Following Statements

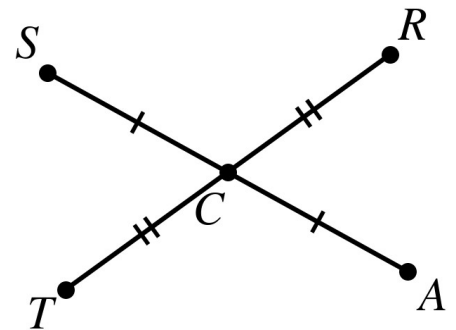
Use the marked figure.

a) $SC = 18$, $CA =$ _____

b) $TC = 21$, $TR =$ _____

c) $SA = 46$, $SC =$ _____

d) C is the midpoint of _____ and _____.

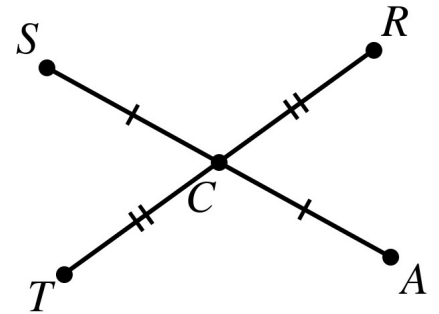


Example 2 - Complete the Following Statements

Use the same marked figure, shown at right.

a) If $SC = 4x + 3$ and $CA = x + 18$, find the value of x .

b) If $TC = 6y - 2$ and $TR = 44$, find the value of y .



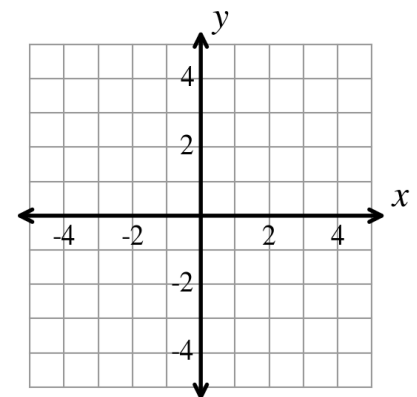
Example 3 - Find the Coordinates of the Midpoint

a) PQ with endpoints $P(-4, 5)$ and $Q(2, -1)$

b) WV with endpoints $W(6, -3)$ and $V(2, 5)$

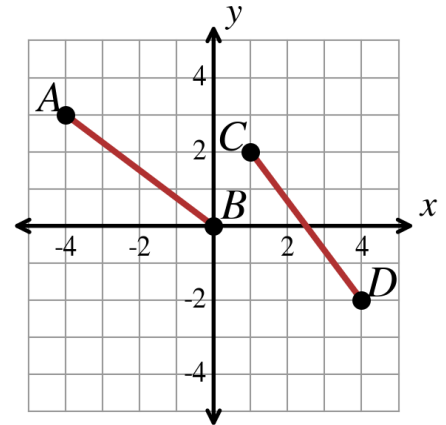
Example 4 - Find One of the Endpoints

M is the midpoint of segment JK . J has coordinates $(-5, 2)$, and M has coordinates $(-1, -1)$. Find the coordinates of K .



Example 5 - Identify Congruent Segments from Graph

Find AB and CD . Then determine if $AB \cong CD$.



Example 6 - Use the Distance Formula

Use the Distance Formula to find GH . $G(-2, -3)$ and $H(4, 5)$

Example 7 - Find the Whole Length

C is the midpoint of DE . $DC = 7x - 4$ and $CE = 4x + 11$. Find the length of DE .

Example 8 - Segment Bisectors

RS bisects JK at point M . $JM = 9x - 5$ and $MK = 5x + 23$. Find x .