Section 1.5 Segment Relationships

Midpoint: The midpoint is half way between the two endpoints of a line segment. The book definition is as follows: the midpoint M or $\overline{PQ}$ is the point between P and Q such that $\overline{PM} = \overline{MQ}$.

To find the midpoint on the number line, simply take the average of the two values. The midpoint between a and b is $\frac{a+b}{2}$.

In a coordinate plane, the midpoint is the average of the x values and the average of the y values. The midpoint between (x_1,y_1) and (x_2,y_2) is $\left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$.

Construction: Page 31 shows the construction to draw a line that crosses another line through the midpoint. Any line intersecting a line at the midpoint is called a **bisector**. A perpendicular bisector bisects another line at a 90° angle. Please review this construction carefully and add it to your construction notebook.

Congruent Segments are segments that are equal in length.

The term congruent can be applied to other objects. If two objects are congruent, they have the same size and shape.