7.1 One-Dimensional Coordinate System

Point coordinates: x_0 , x_1 , x_2 , y_0 , y_1 , y_2

Real number: λ

Distance between two points: d

607. Distance Between Two Points $\mathbf{d} = \mathbf{AB} = |\mathbf{x}_2 - \mathbf{x}_1| = |\mathbf{x}_1 - \mathbf{x}_2|$

$$\frac{d}{A(x_1)} \xrightarrow{B(x_2)} X$$

Figure 86.

608. Dividing a Line Segment in the Ratio λ

$$x_0 = \frac{x_1 + \lambda x_2}{1 + \lambda}$$
, $\lambda = \frac{AC}{CB}$, $\lambda \neq -1$.

Figure 87.

609. Midpoint of a Line Segment

$$x_0 = \frac{x_1 + x_2}{2}$$
, $\lambda = 1$.