

# Download Point Line Line Segment Ray

where  $t$  is a real number. With this representation  $P(0) = P_0$ ,  $P(1) = P_1$ , and  $P(t)$  with  $0 < t < 1$  is a point on the finite segment between  $P_0$  and  $P_1$  where  $t$  is the fraction of  $P(t)$ 's distance along the whole  $P_0 P_1$  line segment. That is,  $M$  is the midpoint of the segment. Further, if  $t < 0$  then  $P(t)$  is outside the segment on the  $P_0$  side, and if  $t > 1$  then  $P(t)$  is outside on the  $P_1$  side. The notion of line or straight line was introduced by ancient mathematicians to represent straight objects (i.e., having no curvature) with negligible width and depth. Lines are an idealization of such objects. Until the 17th century, lines were defined as the "[...] first species of quantity, which has only one dimension, namely length, without any width nor depth, and is nothing else than the ...". This page shows how to draw a perpendicular at a point on a line with compass and straightedge or ruler. It works by effectively creating two congruent triangles and then drawing a line between their vertices. A Euclidean construction. This page shows how to construct a perpendicular to a line through an external point, using only a compass and straightedge or ruler. It works by creating a line segment on the given line, then bisecting it. The bisector will be a right angles to the given line. (See proof below). Printable step-by-step instructions - Point Line Line Segment Ray