

Prior Knowledge

Definitions

- Statements that are accepted without proof are called axioms or postulates.
- Statements that are proved are called theorems.
- Collinear points are points all in one line. The line containing points A and B is denoted \overleftrightarrow{AB} .
- Coplanar points are points all in one plane.
- Space is the set of all points.
- Segment AB (\overline{AB}) consists of points A and B and all points in \overleftrightarrow{AB} which are between A and B. Points A and B are called endpoints of \overline{AB} .
- Ray AB (\overrightarrow{AB}) is the part of \overleftrightarrow{AB} which starts at point A and extends without ending through point B. The endpoint of \overrightarrow{AB} is A, the point named first.
- Opposite rays: \overrightarrow{ST} and \overrightarrow{SR} are called opposite rays if S is between R and T.
- Length of \overline{AB} is the distance between point A and point B. We use the symbol AB to represent this distance.
- Congruent segments are segments with equal length.
- Midpoint of a segment is the point that divides the segment into two congruent segments.
- Bisector of a segment is line, segment, ray, or plane that intersects the segment at its midpoint.
- An angle (\angle) is a figure formed by two rays that have the same endpoint. The two rays are called the sides of the angle and their common endpoint is the vertex of the angle.
- Congruent angles are angles that have equal measure.
- Acute angle – measure between 0° and 90°
- Right angle – Measure 90°
- Obtuse angle – Measure between 90° and 180°
- Straight angle – Measure 180° (i.e. its sides are opposite rays)
- An angle bisector is a ray whose endpoint is the vertex of the angle and which divides the angle into two angles of equal measure.
- Adjacent angles are two angles in a plane that have a common vertex and a common side but no common interior points.
- Perpendicular lines are two lines that form equal adjacent (90°) angles
- Complementary angles are two angles whose measures have the sum 90°
- Supplementary angles are two angles whose measures have the sum of 180°
- Vertical angles are two angles whose sides form two pairs of opposite rays.
- A right triangle is a triangle with one right angle.
- The longest side of a right triangle is the hypotenuse, the shorter sides are the legs.