

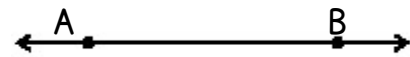
Points, Lines and Angles

A point marks an exact location in space.
Use a letter to name a point.



point A

A line is an endless straight path.
It has no endpoints.
Use two points on the line
to name the line.



line AB or \overleftrightarrow{AB} or
line BA or \overleftrightarrow{BA}

A ray is a part of a line that has
one endpoint and goes forever
in one direction. Use an endpoint
and one point on the ray to name
a ray.



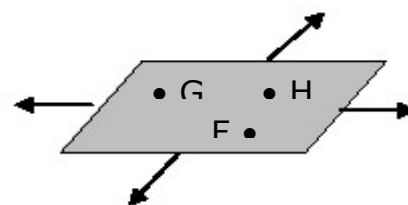
ray KL or \overrightarrow{KL}

A line segment is part of a line
between two endpoints.
Use the two endpoints to name
the line segment.



line segment CD or \overline{CD}
or line segment DC or \overline{DC}

A plane is an endless flat surface.
Use three points that are not on
a line to name the plane.



plane GHF

Examples:

A- Write *True* or *False*.

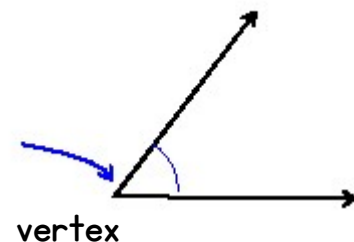
- 1) A ray has one endpoint and goes endlessly in one direction. True
- 2) A line has an endpoint. False
- 3) A point is very exact, and we usually use a letter to name a point. True
- 4) A plane is an endless flat surface. True
- 5) A line segment has only one endpoint. False

An angle is formed by two rays with the same endpoint.

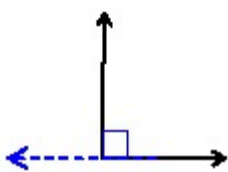
A

An angle can be named by three letters - a point from each side and the vertex as the middle letter. It can also be named by a single letter, its vertex.

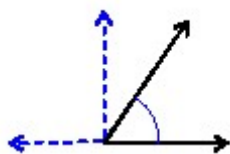
$\angle ABC$, $\angle CBA$, or $\angle B$.



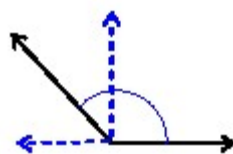
Angles can be different sizes.



A right angle measures 90° .



An acute angle is greater than 0° and less than 90° .



An obtuse angle is greater than 90° and less than 180° .

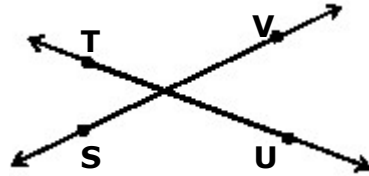


A straight angle measures 180° .

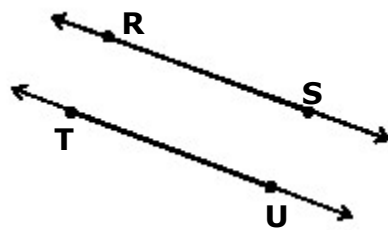
LINE RELATIONSHIPS

Within a plane, lines can have different relationships.

Lines that intersect are intersecting lines.

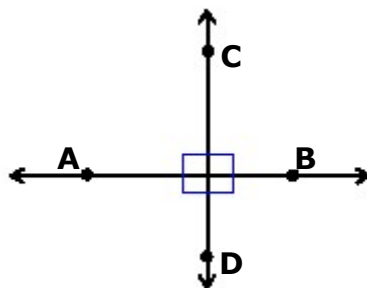


Lines in a plane that never intersect and are the same distance apart at every point are parallel lines.



$\overline{RS} \parallel \overline{TU}$

Lines that cross at one point to form four right angles are perpendicular lines.



$\overline{AB} \perp \overline{CD}$

Examples:

A- Choose the correct answer.

6) A right angle measures: a- 45° b- 75° c- 180° d- 90°

7) Parallel lines: a- intersect b- do not intersect

8) An acute angle can be: a- 120° b- 180° c- **68°** d- 95°

9) A straight angle measures: a- 90° b- **180°** c- 0° d- 50°

10) Two lines intersect in on: a- segment b- line c- **point**

11) An obtuse angle can be: a- **123°** b- 80° c- 185° d- 23°