

# Introduction to Lines and Angles

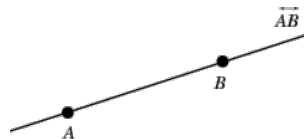
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## Lines

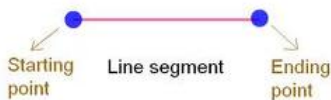


A line is a straight one-dimensional figure having no thickness and extending infinitely in both directions.

A line is sometimes called a [straight line](#).



## Line Segment



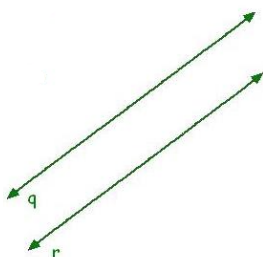
A [line segment](#) is a part of a line that is bounded by two distinct end points and contains every point on the line between its end points.

## Ray



Ray is part of a line which is finite in one direction, but [infinite](#) in the other.

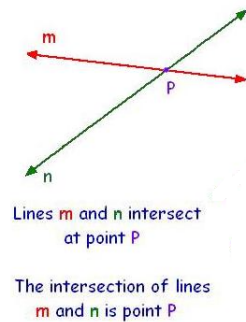
## Parallel lines or Non intersecting lines



Lines  $q$  and  $r$  are parallel and will never intersect

direction and is read as 'l is parallel to m'

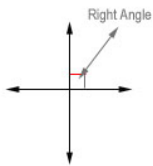
In [geometry](#), two lines can be non-intersecting if and only if they are parallel. A pair of non-parallel lines will intersect somewhere on some point on extension. But parallel lines are never intersecting at any point even if they are extended up to infinity.



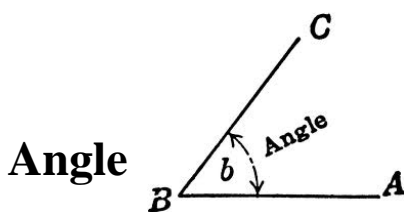
## Intersecting lines

Lines that have one and only one point in common are known as intersecting lines. The point where two lines intersect or cross each other is called the [point of intersection](#). The number and locations of possible intersections between two can be only at one point. But the angles formed between them can be infinite. That is, two lines can pass through one point, intersecting each other in infinite ways.

## Perpendicular Lines



[Perpendicular](#) means "at right angles". A line meeting another at a right angle or  $90^\circ$  is said to be perpendicular to it.

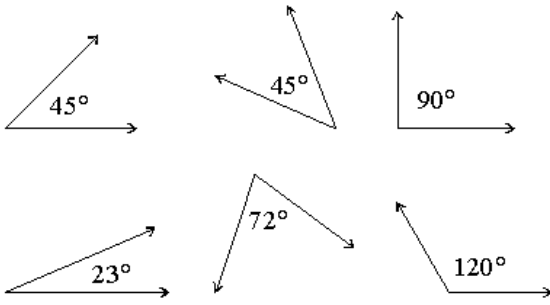


Two rays that share the same endpoint form an [angle](#). The point where the rays intersect is called the vertex of the angle. The two rays are called the sides of the angle.

## Degrees : Measuring Angles

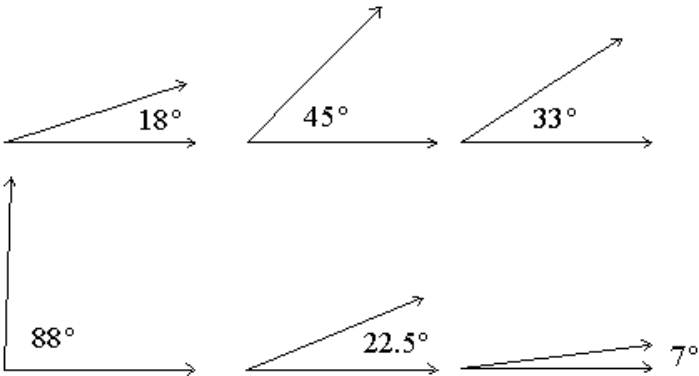
We measure the size of an angle using degrees.

**Example:**



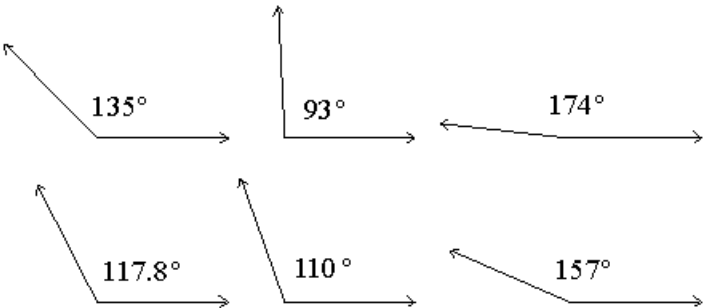
# Acute Angles

An acute angle is an angle measuring between 0 and 90 degrees.



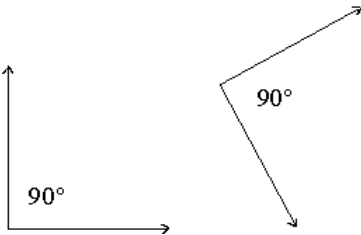
# Obtuse Angles

An obtuse angle is an angle measuring between 90 and 180 degrees.



# Right Angles

A right angle is an angle measuring 90 degrees. Two lines or line segments that meet at a right angle are said to be perpendicular. Note that any two right angles are supplementary angles (a right angle is its own angle supplement).



# Angle Bisector

An angle bisector is a ray that divides an angle into two equal angles.

Now try it yourself! Should you still need any help,[click here](#) to schedule live online session with e Tutor!

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## Reference Links :

- [http://en.wikipedia.org/wiki/Line\\_\(geometry\)](http://en.wikipedia.org/wiki/Line_(geometry))
- [http://en.wikipedia.org/wiki/Line\\_segment](http://en.wikipedia.org/wiki/Line_segment)
- <http://en.wikipedia.org/wiki/Infinity>
- [http://en.wikipedia.org/wiki/Parallel\\_\(geometry\)](http://en.wikipedia.org/wiki/Parallel_(geometry))
- <http://en.wikipedia.org/wiki/Geometry>
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