

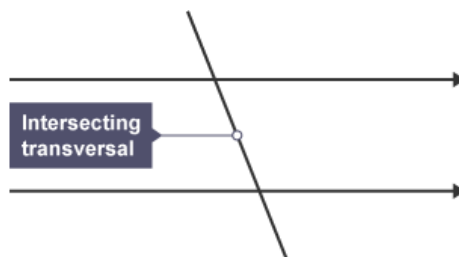
## 1.6 GEOMETRY ON THE PLANE (1) - ANGLES - BASICS

### THEORY

#### 1. BASIC VOCABULARY

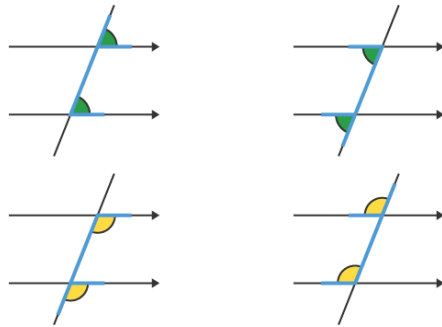
- **point** - an exact location in space. A point has no dimension.
- **straight line (line)** - line with no curvature; a line with constant direction
- **line segment** - a measurable part of a line. Consisting two endpoints.
- **plane** - a flat surface that extends endlessly in all directions.
- **collinear** - points that lie on the same line (opp. non-collinear)
- **angle** - consists of two rays that have a common endpoint called the vertex of the angle.
- **straight angle** – an angle whose measure is  $180^\circ$ .
- **total angle** - an angle whose measure is  $360^\circ$
- **right angle** – an angle whose measure is  $90^\circ$ .
- **acute angle** – an angle whose measure is less than  $90^\circ$ .
- **obtuse angle** – an angle whose measure is more than  $90^\circ$  and less than  $180^\circ$ .
- **adjacent angles** - two angles that share a common side and vertex.
- **complementary angles** - if the sum of their measures is  $90^\circ$ .
- **supplementary angles** - two angles with measures that sum up to  $180^\circ$
- **linear pair** - adjacent angles that are supplementary.
- **intersecting lines** – two lines that cross.
- **parallel lines** – two lines in the same plane that do not intersect.
- **perpendicular lines** – two lines that intersect to form right angles
- **vertical angles** – two angles with equal measure formed by two intersecting lines
- **angle bisector** - a line that divides an angle into two equal parts.
- **angles in parallel lines**

- (a) Parallel lines are lines which are always the same distance apart and never meet.  
Arrowheads show lines are parallel. When a pair of parallel lines is cut with another



line known as an **intersecting transversal**, it creates pairs of angles with special properties.

- (b) **Corresponding angles.** Corresponding angles are equal. The lines make **an F shape**. Notice that the F shape can be upside down or back to front.



- (c) **Alternate angles** Alternate angles are equal. The lines make **a Z shape** which can also be back to front.

