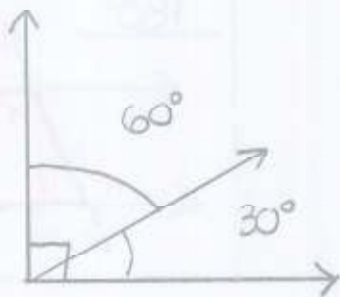
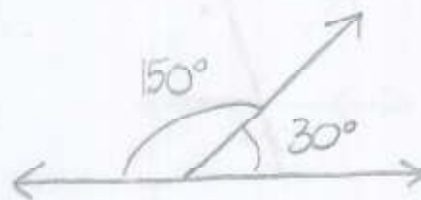


**UNIT 6: ANGLE GEOMETRY****LESSON 1: ANGLE DEFINITIONS AND ANGLE PROPERTIES OF PARALLEL LINES****1) ANGLE DEFINITIONS AND THEOREMS****Complementary Angle Theorem (CAT)**

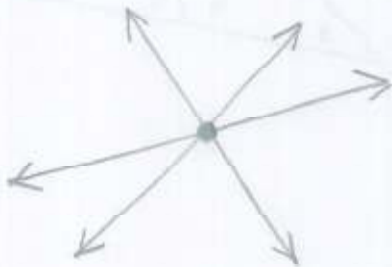
If the sum of two angles is  $90^\circ$ , then the angles are said to be complementary. The sum of adjacent angles forming a straight line is  $180^\circ$ .

**Supplementary Angle Theorem (SAT)**

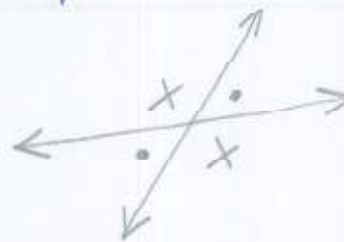
If the sum of two angles is  $180^\circ$ , then the angles are said to be supplementary.

**Angles at a Point**

The sum of all angles that meet at a point is  $360^\circ$ .

**Opposite Angle Theorem (OAT)**

When two lines intersect the opposite angles are equal.



## 2) PROPERTIES OF PARALLEL LINES

### Parallel Line Theorem

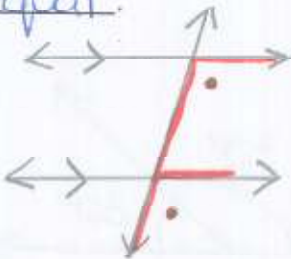
A line that intersects a pair of parallel lines is called a transversal. The following pairs of angles are created when a transversal intersects a pair of parallel lines:

- Corresponding angles - form an "F" pattern.
- Alternate angles - form a "Z" pattern
- Interior angles - form a "C" pattern

#### (PLT-F)

When a transversal intersects a pair of parallel lines the **corresponding angles** are

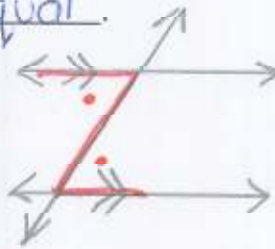
equal.



#### (PLT-Z)

When a transversal intersects a pair of parallel lines the **alternate angles** are

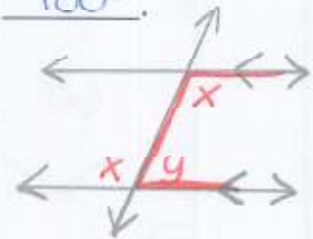
equal.



#### (PLT-C)

When a transversal intersects a pair of parallel lines the sum of the **interior angles** is

180°.



### EXAMPLES

Find the values for the letters.

