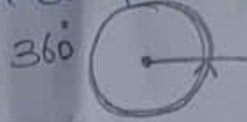


Subject: Mathematics  
Topic: Types of Angles

JSS1

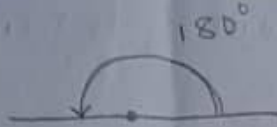
i) Complete rotation

A complete rotation or a complete turn is an angle of  $360^\circ$



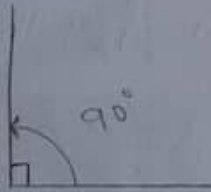
ii) Straight line angle

A straight line angle or a half turn is an angle of  $180^\circ$



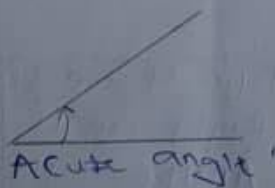
iii) Right angle

A right angle, or a square corner, a quarter turn is an angle of  $90^\circ$



iv) Acute angle

An acute angle is an angle that is less than  $90^\circ$

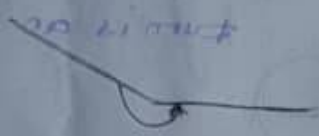


v) Obtuse angle

An obtuse angle is an angle which is greater than  $90^\circ$  but less than  $180^\circ$



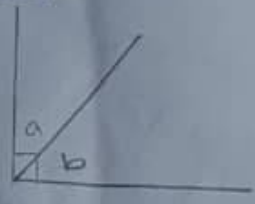
vii) Reflex angle is an angle whose size is greater than  $180^\circ$  but less than  $360^\circ$



### Forms of Angles

(i) Complementary angles.

Two angles are said to be complementary if their sum is  $90^\circ$ .



$$a + b = 90^\circ$$

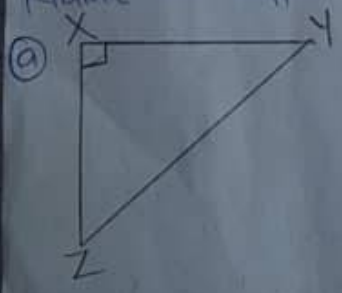
(ii) Supplementary angles.

Two angles are said to be supplementary if their sum is  $180^\circ$ .



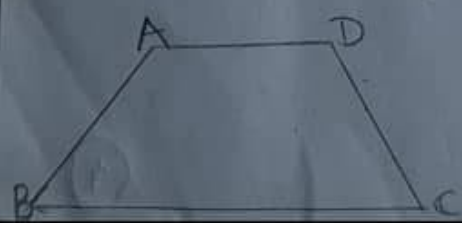
$$a + b = 180^\circ$$

Example  
Name the types of each of the angles in the plane shapes.



Solution

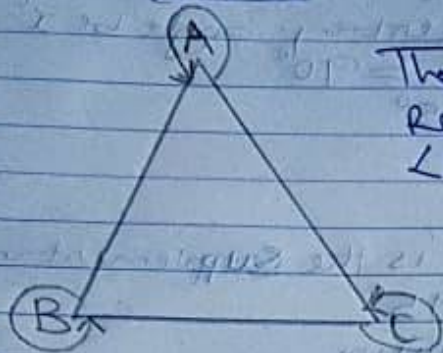
Angle	Type of angle
$\angle ZXY$	Right angle
$\angle XYZ$	Acute angle
$\angle XZY$	Acute angle



Angle	Type of angle.
$\angle BAD$	Obtuse angle
$\angle ABC$	Acute angle
$\angle BCD$	Acute angle
$\angle CDA$	Obtuse angle

Example 2: Name three reflex angles associated with any triangle ABC

Solution



The reflex angles are:  
 Reflex  $\angle BAC$ , reflex  $\angle ABC$ , reflex  $\angle BCA$

Example 3: Name the type of each of the following angles

- a)  $200^\circ$    b)  $140^\circ$    c)  $90^\circ$    d)  $75^\circ$

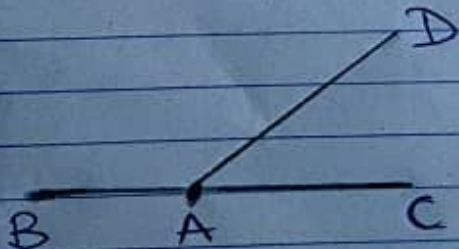
Solution

Angles	Types of Angles
a) $200^\circ$	Reflex angles
b) $140^\circ$	Obtuse angle
c) $90^\circ$	Right angle
d) $75^\circ$	Acute angle

Example 4: Calculate  $\angle DAC + \angle DAB$

b) What type of angles are  $\angle DAC$  and  $\angle DAB$ ?

Solution



a)  $\angle DAC + \angle DAB = 180^\circ$

b)  $\angle DAC$  and  $\angle DAB$  are supplementary angles.

Example 5: What is the Complementary angle to an angle of  $65^\circ$ ?

Solution

Let the Complementary angle be  $x^\circ$

$$\text{then } 65 + x = 90^\circ$$

$$x^\circ = 90 - 65^\circ$$

$$x^\circ = 25^\circ$$

Example 6: What is the Supplementary angle to an angle of  $95^\circ$ ?

Solution

Let the Supplementary angle be  $x^\circ$

$$\text{then } 95^\circ + x = 180^\circ$$

$$x = 180^\circ - 95^\circ$$

$$x = 85^\circ$$

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