



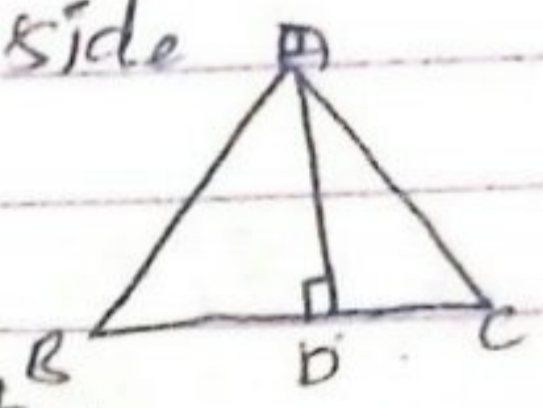
STUDENT'S NAME		RELEASED	
CLASS		SUBJECT	
DATE			

# Bridge Course

## X - MATHEMATICS

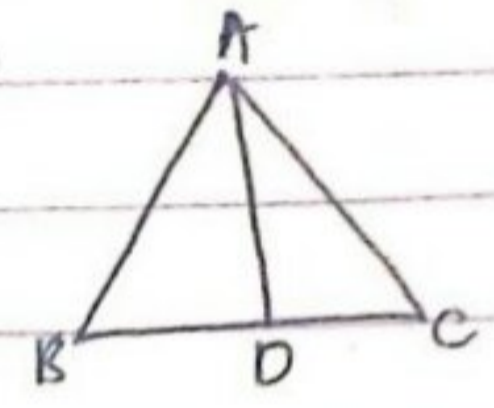
1. Define the following:

a) Altitude: A perpendicular line drawn from an opp vertex to the opposite side  
[In  $\triangle ABC$ ,  $AD \perp BC$ ],  $AD \rightarrow$  Altitude.



b) Median: A line drawn from vertex to mid-point of opposite side.  
 $AD \rightarrow$  median.

[In  $\triangle ABC$ ,  $BD = CD$ ]



2) Congruent triangles:

If three properties of one triangle is equal to three properties of another triangle then they are congruent.

3) There are 5 postulates of congruent triangle:  
SSS, SAS, ASA, AAS and RHS.

4) Natural numbers:

The counting numbers are called natural numbers, and it starts from 1.

ex: 1, 2, 3, 4, ...  
 $N = \{1, 2, 3, 4, \dots\}$ .

properties:

- a) Closure property
- b) Associative property
- c) Commutative property
- d) Distributive property.

5) Solve for 'x' :-

a)  $2x - 4 = x - 9$   
 $2x - x = -9 + 4$   
 $x = -5$

b)  $2(4x - 7) = 8(5x - 7)$   
 $8x - 14 = 40x - 56$   
 $8x - 40x = -56 + 14$   
 $-32x = -42$

$$x = \frac{-42}{-32} = \frac{21}{16}$$

c)  $5x = 40$   
 $x = 40/5$

$$x = 8$$

d)  $\frac{7x}{2} = 49$

$$7x = 49 \times 2$$

$$x = \frac{49 \times 2}{7}$$

$$\therefore x = 14$$

$$x = \frac{21}{16}$$

6) Write CSA, TSA and Volume of the cylinder, cube and cuboid:

	CSA	TSA	Volume.
Cube	$4a^2$	$6a^2$	$a^3$
Cuboid	$2(l+b)h$	$2(lb+bh+hl)$	$lbh$
Cylinder	$2\pi r$	$2\pi r(r+h)$	$\pi r^2 h$

7) Simplify:

$$19^2 + \sqrt{324} + 3^3 - \sqrt[3]{512}$$

a)  $19^2 + \sqrt{324} + 3^3 - \sqrt[3]{512}$

8) fill in the blanks:

$$a^3 - b^3 = (a-b)(a^2 + ab + b^2)$$

$$a^2 - b^2 = (a+b)(a-b)$$

$$(a+b+c)^2 = a^2 + b^2 + c^2 + 2ab + 2bc + 2ca$$

9) Define Arc and Chord:

Arc: The part of the circumference of the circle.

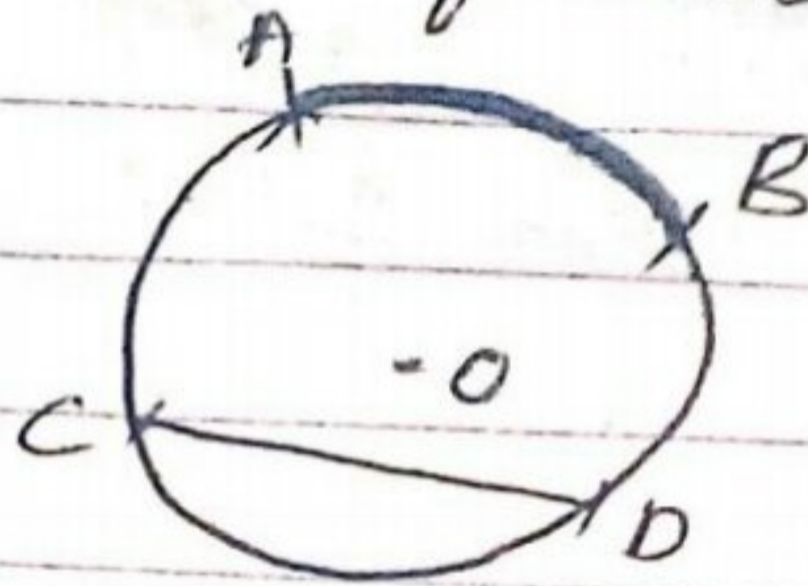
Chord :

The line formed by joining any two points on the circumference of the circle.

O → Centre

AB → Arc

CD → Chord.



10) Define radius and diameter :

Radius :

A line drawn from the Centre to any point on the circumference.

Diameter :

A chord which passes through the Centre of the circle.