Class: Seven

Subject- Computer

1) **Convert the following numbers as indicated:**
   a) $11110_2 = (?)_{10}$ b) $50_{10} = (?)_2$ c) $10101_2 = (?)_{10}$ d) $25_{10} = (?)_2$
   e) $11010_2 = (?)_{10}$ b) $55_{10} = (?)_2$ c) $11111_2 = (?)_{10}$ d) $64_{10} = (?)_2$

Subject- English

Lincoln's Letter
White House Washington DC
 Dear Sir,
He will have to learn I know, that all men are not just, all men are not true. But teach him also that for every selfish politician, there is a dedicated leader and for every scoundrel there is a hero… Teach him that for every enemy there is a friend. It will take time, I know, but teach him, if you can, that a dollar earned is of far more value than five pound… Teach him to learn to lose … and also to enjoy winning. Steer him away from envy; if you can, teach him the secret of quiet laughter. Let him learn early that the bullies are the easiest to lick … Teach him if you can, the wonder of books … but also give him quiet time to ponder the eternal mystery of birds in the sky, bees in the sun and flowers on a green hill side.
In the school teach him it is far more honourable to fail than to cheat… teach him to have faith in his own ideas, even if everyone tells him he is wrong… Teach him to be gentle with gentle people and tough with the tough. Try to give him strength not to follow the crowd when everyone is getting on the bandwagon. Teach him to listen to all men… but teach him also to filter all he hears on a screen of truth.
Teach him if you can, how to laugh when he is sad… Teach him there is no shame in tears. Teach him to scoff at cynics and to be beware of too much sweetness… Teach him to sell his talents and brains to the highest bidder, but never to put a price tag on his heart and soul. Teach him to close his ears to a howling mob… and to stand and fight if he thinks he is right.
Teach him gently but do not cuddle him, because only the test of fire makes fine steel. Let him have the courage to be impatient. Let him have the patience to be brave. Teach him always to have sublime faith in himself, because then he will always have sublime faith in humankind.
Yours faithfully,
Abraham Lincoln

1. Read the text above and fill in the gaps with the correct word from the list below.
    Enemy steer bandwagon cuddle impatient
   (a) Don't be ………. even in your hard times.

(b) We should not fight even with our ………..

(c) Teachers should ……. their students in the right path.

(d) Do not ………... him so that he will start acting stupidly.

(e) Give him strength not to follow the crowd when everyone is getting on the …..

2. Read the text again and answer these questions.

(a) Who wrote the letter?

(b) Why did he write the letter?

(c) What does he mean by 'a dollar earned is of far more value than five pound'?

(d) Why did he request his son's teacher to teach him to learn to lose?

(e) What did Lincoln want to see?

(f) Why did he advise not to follow the crowd?

(g) What did he request his son's teacher?

Subject- Mathematics

Source: Photo of exercise are given below.

They are called vertically opposite angles. ∠AOD and ∠BOC are another pair of vertically opposite angles. Vertically opposite angles are always equal.

∴ ∠AOC = ∠BOD and ∠AOD = ∠BOC.

(iv) Complementary angles

The sum of ∠AOB and ∠BOC is a right angle (90°).

i.e. ∠AOB + ∠BOC = 90°

∠AOB and ∠BOC are called complementary angles.

Here, complement of ∠AOB = 90° − ∠BOC.

complement of ∠BOC = 90° − ∠AOB
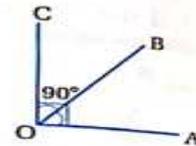
(v) Supplementary angles

The sum of ∠AOB and ∠BOC is two right angles (180°).

i.e. ∠AOB + ∠BOC = 180°.

∠AOB and ∠BOC are called supplementary angles.

Here, supplement of ∠AOB = 180° − ∠BOC

supplement of ∠BOC = 180° − ∠AOB.
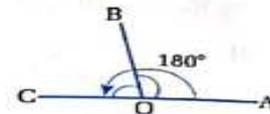
12.2 Verification of properties of angles

Activity - 1

Verify experimentally that the vertically opposite angles formed due to the intersection of two line segments are equal.

Verification

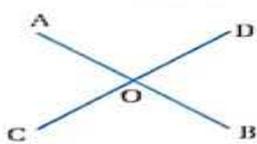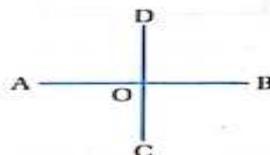(i) Draw 3 sets of two line segments AB and CD intersecting at O.
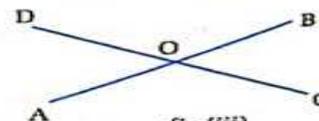
fig (i)   fig (ii)   fig (iii)

(ii) Measure each pair of vertically opposite angles: ∠AOD and ∠BOC, ∠AOC and ∠BOD with a protractor and write the measurements in the table.

| Fig.	Vertically opposite angles		Result
	∠AOD and ∠BOC	∠AOC and ∠BOD	
(i)			∠AOD = ∠BOC
(ii)			∠AOC = ∠BOD
(iii)			

Conclusion: The vertically opposite angles formed due to the intersection of two line segments are equal.

Activity - 2

Experimentally verify that the sum of adjacent angles in linear pair is 180°.

Verification

(i) Draw 3 sets of adjacent angles ∠AOC and ∠BOC in linear pair.

fig (i) fig (ii) fig (iii)
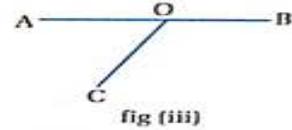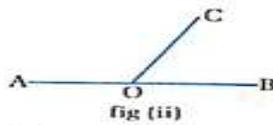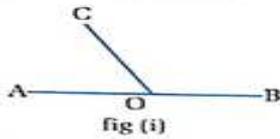
(ii) Measure ∠AOC and ∠BOC with a protractor and write the measurements in the table.

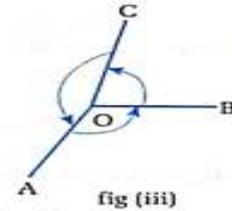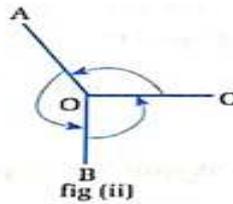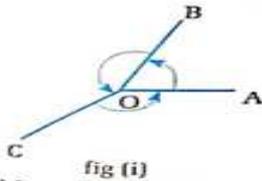| Fig. No.	∠AOC	∠BOC	∠AOC + ∠BOC	Result
(i)				
(ii)				∠AOC + ∠BOC = 180°
(iii)				

Conclusion: The sum of adjacent angles in linear pair is 180°.

Activity - 3

Verify experimentally that the angle formed by a revolving line in a complete rotation at a point is 360°.

Verification

(i) Draw 3 sets of angles ∠AOB, ∠BOC and ∠COA formed by a revolving line OA in a complete rotation at O.

fig (i) fig (ii) fig (iii)

(ii) Measure ∠AOB, ∠BOC and ∠COA with a protractor and write the measurements in the table.

Fig. No.	∠AOB	∠BOC	∠COA	∠AOB + ∠BOC + ∠COA	Result
(i)					
(ii)					∠AOB + ∠BOC + ∠COA = 360°
(iii)					

Conclusion: The angle formed by a revolving line in a complete rotation at a point O is 360°.

Homework: Practice activity 1, 2 & 3.

The End.