

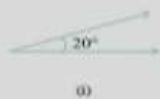


## Maths

### Class – VII

#### EXERCISE 5.1

1. Find the complement of each of the following angles:



(i)



(ii)



(iii)



2. Find the supplement of each of the following angles:



(i)



(ii)



(iii)

3. Identify which of the following pairs of angles are complementary and which are supplementary.

- (i)  $65^\circ, 115^\circ$     (ii)  $63^\circ, 27^\circ$     (iii)  $112^\circ, 68^\circ$   
(iv)  $130^\circ, 50^\circ$     (v)  $45^\circ, 45^\circ$     (vi)  $80^\circ, 10^\circ$

4. Find the angle which is equal to its complement.

5. Find the angle which is equal to its supplement.

6. In the given figure,  $\angle 1$  and  $\angle 2$  are supplementary angles.



If  $\angle 1$  is decreased, what changes should take place in  $\angle 2$  so that both the angles still remain supplementary.

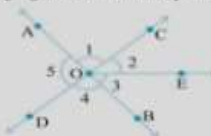
7. Can two angles be supplementary if both of them are:

- (i) acute?    (ii) obtuse?    (iii) right?

8. An angle is greater than  $45^\circ$ . Is its complementary angle greater than  $45^\circ$  or equal to  $45^\circ$  or less than  $45^\circ$ ?

9. In the adjoining figure:

- (i) Is  $\angle 1$  adjacent to  $\angle 2$ ?  
(ii) Is  $\angle AOC$  adjacent to  $\angle AOE$ ?  
(iii) Do  $\angle COE$  and  $\angle EOD$  form a linear pair?  
(iv) Are  $\angle BOD$  and  $\angle DOA$  supplementary?  
(v) Is  $\angle 1$  vertically opposite to  $\angle 4$ ?  
(vi) What is the vertically opposite angle of  $\angle 5$ ?



10. Indicate which pairs of angles are:

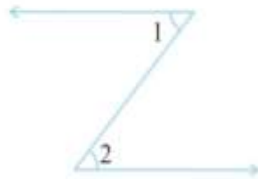
- (i) Vertically opposite angles.    (ii) Linear pairs.



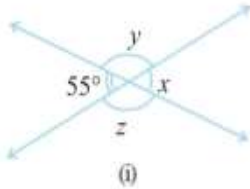
11. In the following figure, is  $\angle 1$  adjacent to  $\angle 2$ ? Give reasons.



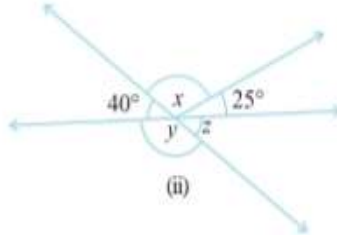
11. In the following figure, is  $\angle 1$  adjacent to  $\angle 2$ ? Give reasons.



12. Find the values of the angles  $x$ ,  $y$ , and  $z$  in each of the following:



(i)



(ii)

13. Fill in the blanks:

- (i) If two angles are complementary, then the sum of their measures is \_\_\_\_\_.
- (ii) If two angles are supplementary, then the sum of their measures is \_\_\_\_\_.
- (iii) Two angles forming a linear pair are \_\_\_\_\_.
- (iv) If two adjacent angles are supplementary, they form a \_\_\_\_\_.
- (v) If two lines intersect at a point, then the vertically opposite angles are always \_\_\_\_\_.
- (vi) If two lines intersect at a point, and if one pair of vertically opposite angles are acute angles, then the other pair of vertically opposite angles are \_\_\_\_\_.

14. In the adjoining figure, name the following pairs of angles.

- (i) Obtuse vertically opposite angles
- (ii) Adjacent complementary angles
- (iii) Equal supplementary angles
- (iv) Unequal supplementary angles
- (v) Adjacent angles that do not form a linear pair

