

**Class: VII**  
**Subject: Math's**  
**Topic: Lines and angles**  
**No. of Questions: 20**

Q1 In fig 5.4, are the angles 1 and 2 of the letter N forming a pair of adjacent angles? Give reasons.

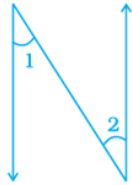


Fig. 5.4

Q2. In fig. 5.6  $AB \parallel EF$ ,  $ED \parallel CD$  and  $\angle APE$  is  $39^\circ$ . Find  $\angle CQF$ .

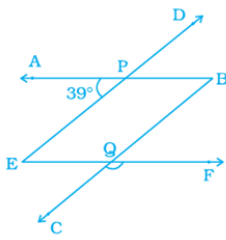
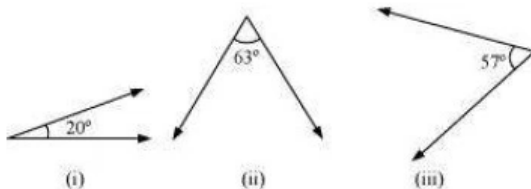


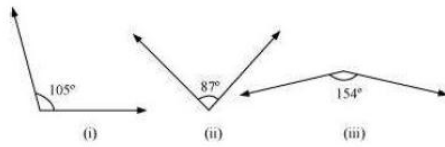
Fig. 5.6

Q3 In fig. 5.7, CD intersects the line AB at F,  $\angle CFB = 50^\circ$  and  $\angle EFA = \angle AFD$ . Find the measure of  $\angle EFC$ .

Q4. Find the complement of each of the following angles:



Q5. Find the supplement of each of the following angles:



Q6. Find the angle which is equal to its supplement

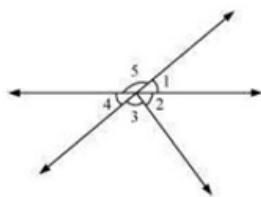
Q7. Can two angles be supplementary if both of them are:

- (i) Acute?
- (ii) Obtuse?
- (iii) Right?

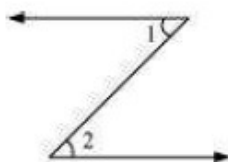
Q8. An angle is greater than  $45^\circ$ . Is its complementary angle greater than  $45^\circ$  or equal to  $45^\circ$ ?

Q9. Indicate which pairs of angles are:

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



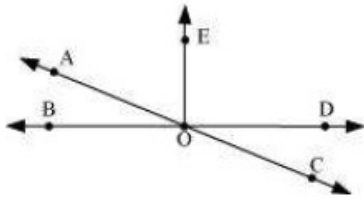
Q10. In the following figure, is  $\angle 1$  adjacent to  $\angle 2$ ? Give reason.



Q11. Fill in the blank:

- (i) If two angles are complementary, then the sum of their measures is -----.
- (ii) If two angles are supplementary, then the sum of their measure 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 of vertically opposite angles are -----.

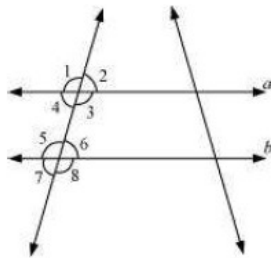
Q12. In the adjoining figure, name the following pairs of angles.



- (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

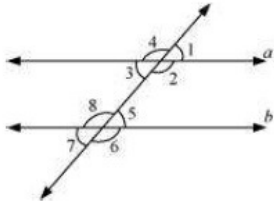
Q13. State the property that is used in each of the following statements?

- (i) If  $a \parallel b$ , then  $\angle 1 = \angle 5$
- (ii) If  $\angle 4 = \angle 6$ , then  $a \parallel b$
- (iii) If  $\angle 4 + \angle 5 = 180^\circ$ , then  $a \parallel b$

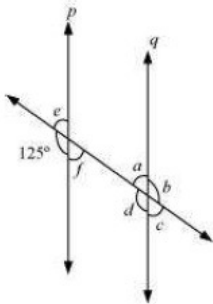


Q14. In the adjoining figure, identify

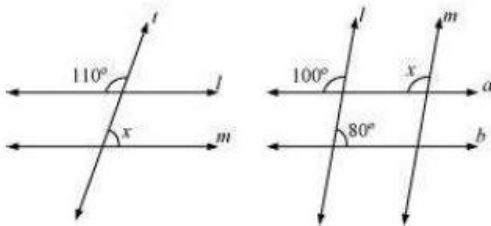
- (i) The pairs of corresponding angles
- (ii) The pairs of alternate interior angles
- (iii) The pairs of interior angles on the same side of the transversal
- (iv) The vertically opposite angles



Q15. In the adjoining figure,  $p \parallel q$ . Find the unknown angles.



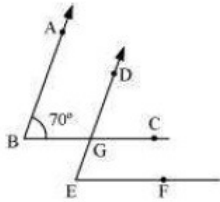
Q16. Find the value of  $x$  in each of the following figures if  $l \parallel m$ .



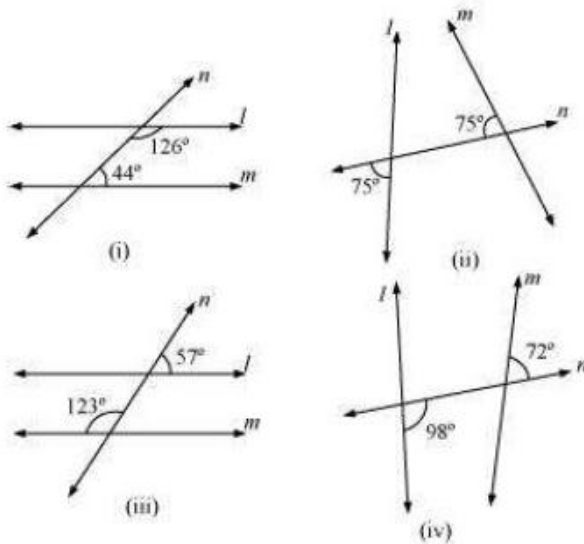
Q17. In the given figure, the arms of two angles are parallel.

If  $\angle ABC = 70^\circ$ , then find

- (i)  $\angle DGC$
- (ii)  $\angle DEF$



Q18. In the given figures below, decide whether **l** is parallel to **m**.



Q19. If a ray stands on a line, then the sum of two adjacent angles so formed is -----  
 ( $0^\circ/90^\circ/180^\circ/360^\circ$ )

Q20. Two lines in a plane can be \_\_\_\_\_ (only intersecting/only parallel/both intersecting parallel) lines.

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