



MATHS

NCERT - NCERT Mathematics(English)

LINES AND ANGLES

Exercise 5.1

1. Can two angles be supplementary if both of them are: (i) acute? (ii) obtuse?
- (iii) right?



[Watch Video Solution](#)

2. 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.



[Watch Video Solution](#)

3. Find the angle which is equal to its supplement

A. 90°

B. 135°

C. 180°

D. 120°

Answer: *A*



Watch Video Solution

4. Find the angle which is equal to its complement



 [Watch Video Solution](#)

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



[Watch Video Solution](#)

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



[Watch Video Solution](#)

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



Watch Video Solution

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





[Watch Video Solution](#)

9. An angle is greater than 45° . Is its complementary angle greater than 45° or equal to 45° or less than 45° ?



[Watch Video Solution](#)

10. Indicate which pairs of angles are:(i) Vertically opposite angles. (ii) Linear pairs.



[Watch Video Solution](#)

11. In the following figure, is 1 adjacent to 2?

Give reasons



Watch Video Solution

12. Find the values of the angles x , y , and z in

each of the following:



Watch Video Solution

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 _____.



[Watch Video Solution](#)

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



[Watch Video Solution](#)

Solved Examples

1. In Fig (5.18) identify:(i) Five pairs of adjacent angles. (ii) Three linear pairs.(iii) Two pairs of vertically opposite angles



[Watch Video Solution](#)

Exercise 5 2

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



Watch Video Solution

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



Watch Video Solution

3. In the given figure, the arms of two angles are parallel. If $\angle DGC = x^\circ$, then find (i) $\angle DEF$



[Watch Video Solution](#)

4. 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.



[Watch Video Solution](#)

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



[Watch Video Solution](#)

6. State the property that is used in each of the following statements? (i) If $\angle a \parallel \angle b$, then $\angle 1 = \angle 5$. (ii) If $\angle 4 = \angle 6$, then $a \parallel b$. (iii) If $\angle 4 + \angle 5 = 180^\circ$, then $a \parallel b$.



[Watch Video Solution](#)

