



KINETICS

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IIT-JEE | Medical | Foundations

Lines and Angles

Question 1.

$(180^\circ, 5^\circ)$ pair of angle is given :

- (a) complementary
- (b) supplementary
- (c) None of these

Answer: (c) None of these

As sum of two angles is neither 90° nor 180° .

Question 2.

What is the measure of the complement of 65° ?

- (a) 25°
- (b) 55°
- (c) 65°
- (d) 45°

Answer: (a) 25°

Question 3.

Complementary to 0° angle is :

- (a) 90°
- (b) 95°
- (c) 75°
- (d) None of these

Answer: (a) 90°

Sum of complementary angles is 90° .

Question 4.

Identify which of the following pairs of angles are complementary.

- (a) $65^\circ, 115^\circ$

- (b) 130° , 50°
- (c) 63° , 27°
- (d) 112° , 68°

Answer: (c) 63° , 27°

Question 5.

Complementary to 70° angle is :

- (a) 20°
- (b) 30°
- (c) 40°
- (d) None of these

Answer: (a) 20°

Sum of complementary angles is 90° .

Question 6.

What happens to the measurement of an angle after the extension of its arms?

- (a) Doubles
- (b) Triples
- (c) Remains the same
- (d) Cannot be said

Answer: (c) Remains the same

Question 7.

Complementary to 95° angle is :

- (a) 5°
- (b) 0°
- (c) 10°
- (d) None of these

Answer: (d) None of these

None of these, as sum of complementary angles is 90° .

Question 8.

What is the supplement of 105°

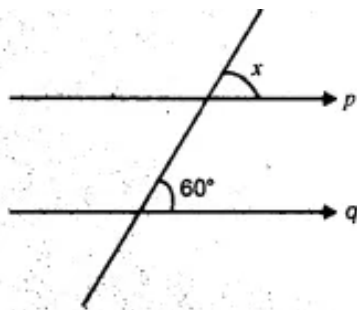
- (a) 65°
- (b) 75°

- (c) 85°
- (d) 95°

Answer: (b) 75°

Question 9.

Find the value of x in the given figure if lines $p \parallel q$:



- (a) $x = 60^\circ$
- (b) 50°
- (c) 75°
- (d) none of these

Answer: (a) $x = 60^\circ$

If two lines are parallel then corresponding angles are equal.

Question 10.

Identify which of the following pairs of angles are supplementary.

- (a) $45^\circ, 45^\circ$
- (b) $63^\circ, 27^\circ$
- (c) $112^\circ, 68^\circ$
- (d) $80^\circ, 10^\circ$

Answer: (c) $112^\circ, 68^\circ$

Question 11.

Measure of the supplement of 0° :

- (a) 180°
- (b) 90°
- (c) 175°
- (d) None of these

Answer: (a) 180°

Sum of supplementary angles is 180° .

Question 12.

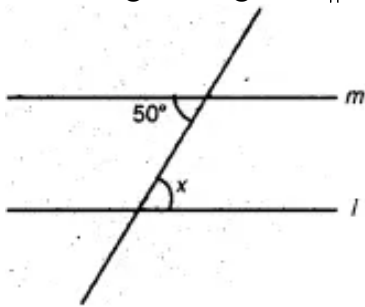
What do we call an angle whose measurement is exactly equal to 0° ?

- (a) An obtuse angle
- (b) A straight angle
- (c) A zero angle
- (d) A right angle

Answer: (c) A zero angle

Question 13.

If in the given figure $l \parallel m$ then :



- (a) $x = 50^\circ$
- (b) $x = 60^\circ$
- (c) No relation

Answer: (a) $x = 50^\circ$

These are alternating angles.

Question 14.

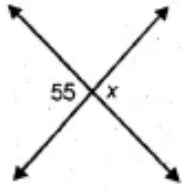
What are the lines which lie on the same plane and do not intersect at any point called?

- (a) Perpendicular lines
- (b) Intersecting lines
- (c) Parallel lines
- (d) Collinear lines

Answer: (c) Parallel lines

Question 15.

In the given figure value of x is :



(b) 45°

- (a) 55°
- (b) 45°
- (c) 65°
- (d) None of these

Answer: (a) 55°

Vertically opposite angles are equal.

Question 16.

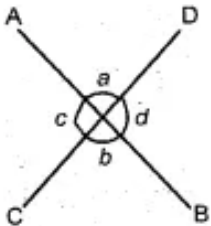
Find the angle, which is equal to its complement.

- (a) 45°
- (b) 25°
- (c) 35°
- (d) 30°

Answer: (a) 45°

Question 17.

Indicate vertically opposite angles :



- (a) (a, d)
- (b) (a, b) and (c, d)
- (c) (a, c) and
- (d) None of these

Answer: (b) (a, b) and (c, d)

Lines AB and CD are intersecting each other.

Question 18.

How many rays can be drawn from a given point?

- (a) 2
- (b) 5
- (c) 8
- (d) Infinitely many

Answer: (d) Infinitely many

Question 19.

What do we call an angle which exactly measures 90° ?

- (a) An obtuse angle
- (b) An acute angle
- (c) A right angle
- (d) A reflex angle

Answer: (c) A right angle

Question 20.

If two angles are supplementary then the sum of their measures is _____.

- (a) 45°
- (b) 180°
- (c) 90°
- (d) 360°

Answer: (b) 180°

Question 21.

Measure of the supplement of 100° :

- (a) 70°
- (b) 75°
- (c) 80°
- (d) None of these

Answer: (c) 80°

Sum of supplementary angles is 180° .

Question 22.

The sum of all angles around a point is

- (a) 0°
- (b) 180°

- (c) 360°
- (d) 90°

Answer: (c) 360°

Question 23.

Which instrument is used to measure or construct angles?

- (a) Compasses
- (b) Scale
- (c) Protractor
- (d) Set squares

Answer: (c) Protractor

Question 24.

Measure of the supplement of 55° :

- (a) 45°
- (b) 125°
- (c) 100°
- (d) None of these

Answer: (b) 125°

Sum of supplementary angles is 180° .

Question 25.

A line that intersects two or more lines at distinct points is called

- (a) parallel
- (b) transversal
- (c) intersecting
- (d) None of these

Answer: (b) transversal

Question 26.

Complementary pair of angles :

- (a) $70^\circ + 20^\circ$
- (b) $30^\circ + 45^\circ$
- (c) $0^\circ + 95^\circ$
- (d) None of these

Answer: (a) $70 + 20$
Sum of two angles is 90° .

Question 27.

Find the angle, which is equal to its supplement.

- (a) 60°
- (b) 90°
- (c) 120°
- (d) 30°

Answer: (b) 90°

Question 28.

Identify supplementary pair of angles :

- (a) $0^\circ - 90^\circ$
- (b) $30^\circ, 150^\circ$
- (c) $45^\circ - 145^\circ$
- (d) None of these

Answer: (b) $30^\circ, 150^\circ$

If sum of two angles is 180° , i.e., pair of supplementary.

Question 29.

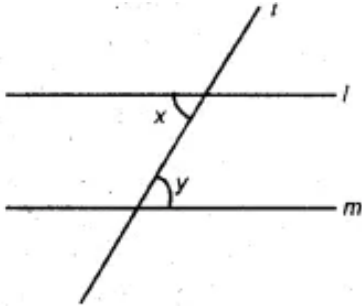
If two lines intersect at a point, then the vertically opposite angles are always _____ .

- (a) supplementary
- (b) equal
- (c) unequal
- (d) none of these

Answer: (b) equal

Question 30.

If in the given figure $\angle x = \angle y$ then :



- (a) $l \parallel m$
- (b) $l \neq m$
- (c) none of these

Answer: (a) $l \parallel m$

Two lines are parallel if alternating angles are equal.

Question 31.

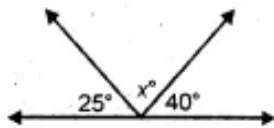
If two adjacent angles are supplementary, then they form _____ .

- (a) a linear pair of angles
- (b) vertically opposite angles
- (c) Corresponding angles
- (d) a ray

Answer: (a) a linear pair of angles

Question 32.

In the given value of x is :



- (a) 35°
- (c) 15°
- (b) 90°
- (d) None of these

Answer: (c) 15°

Sum of linear pair is 180° .

Question 33.

What is the measure of the complement of 41° ?

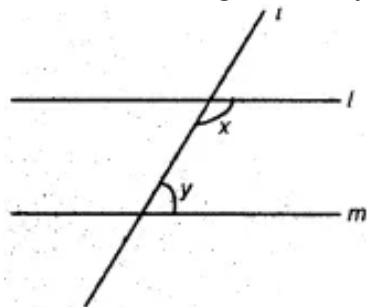
- (a) 135°

- (b) 15°
 (c) 49°
 (d) None of these

Answer: (c) 49°

Question 34.

Find sum of angle x and y if in the given figure $l \parallel m$:



- (a) 90°
 (b) 180°
 (c) 175°
 (d) none of these

Answer: (b) 180°

If two lines are parallel then sum of interior opposite angles is 180° .

Match the following:

Question 1.

(a) $30^\circ 60^\circ$	1. Linear pair
(b) $90^\circ 90^\circ$	2. Complementary angles
(c) $30^\circ 150^\circ$	3. Supplementary angles
(d) 45°	4. Acute angle

Answer:

(a) $30^\circ 60^\circ$	2. Complementary angles
(b) $90^\circ 90^\circ$	1. Linear pair
(c) $30^\circ 150^\circ$	3. Supplementary angles
(d) 45°	4. Acute angle

Question 2.

(a) 100°	1. 125°
(b) 90°	2. 65°
(c) 55°	3. 90°
(d) 115°	4. 80°

Answer:

(a) 100°	4. 80°
(b) 90°	3. 90°
(c) 55°	1. 125°
(d) 115°	2. 65°

State whether the given statements are true or false:

Question 1.

Can two acute angles form a linear pair ?

Answer: false

Question 2.

Can two obtuse angles form a linear pair ?

Answer: false

Question 3.

Can two right angles form a linear pair ?

Answer: true

Question 4.

Are two alternate angles equal if a transversal intersects two parallel lines ?

Answer: true

Question 5.

One acute and one obtuse angle can form a linear pair.

Answer: true

Question 6.

Two obtuse angles are complementary.

Answer: false

Question 7.

One acute and one obtuse angle can be supplementary.

Answer: true

Question 8.

Sum of linear pair is 180° .

Answer: true

Fill in the blanks:

1. The sum of the measures of two angles is 180° , the angles are called angles.

Answer: supplementary

2. Two lines intersect and the vertically opposite angles so formed are

Answer: equal

3. Adjacent angles have a common and a common

Answer: vertex, arm

4. If two adjacent angles are supplementary, they form a

Answer: linear pair

5. The sum of the measures of two angles is 90° , the angles are called angles.

Answer: complementary

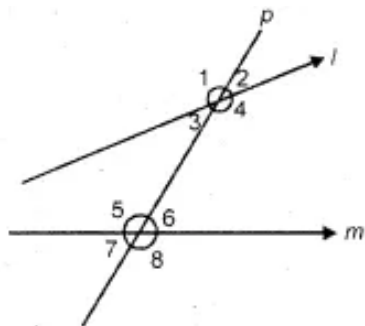
6. Line segment has end points.

Answer: two

7. Two angles forming a linear pair are

Answer: supplementary

With the help of given figure, Answer the following questions:



Question 1.

Interior angles

Answer: $\angle 3$, $\angle 4$, $\angle 5$, $\angle 6$

Question 2.

Exterior angles

Answer: $\angle 1$, $\angle 2$, $\angle 7$, $\angle 8$

Question 3.

Pairs of corresponding angles

Answer: $\angle 1$ and $\angle 5$, $\angle 2$ and $\angle 6$, $\angle 3$ and $\angle 7$, $\angle 4$ and $\angle 8$

Question 4.

Pairs of alternate interior angles

Answer: $\angle 3$ and $\angle 6$, $\angle 4$ and $\angle 5$

Question 5.

Pairs of alternate exterior angles

Answer: $\angle 1$ and $\angle 8$, $\angle 2$ and $\angle 7$

Question 6.

Pair of interior angles on the same side of the transversal

Answer: $\angle 3$ and $\angle 5$, $\angle 4$ and $\angle 6$
