



BAL BHARATI PUBLIC SCHOOL, PITAMPURA, DELHI – 110034

SUBJECT- MATHEMATICS

CLASS IX

LINES AND ANGLES (Part – 2)

GUIDELINES:

Dear Students

- Kindly read the content given below and view the links shared for better understanding.
- Solve the given questions in the yellow register provided in the notebook set.
- Make index in the beginning with following columns-S.no, Topic,Date,Signature.
- If you couldn't buy the notebook set, you can do the work in some new notebook or old maths notebook of class VIII till school re-opens.

Link for the chapter:- <http://ncert.nic.in/textbook/pdf/iemh106.pdf>

INTRODUCTION:

You have already studied the properties of the angles formed when two lines intersect each other And also the properties of the angles formed when a line intersects two or more parallel lines at distinct points.Now let's move ahead with the topic.

- Lines which are parallel to the same line are parallel to each other.
- The sum of the angles of a triangle is 180° .

SUBTOPICS:

- Angle sum property of a triangle:
- If a side of a triangle is produced, then the exterior angle so formed is equal to the sum of the two interior opposite angles

Key points and important links for reference:

1. Theorem 6.7 : Angle sum property of a triangle
<https://www.youtube.com/watch?v=gXmt19FWGdw>
2. Exercise 6.3- Question 6 <https://www.youtube.com/watch?v=di-EBdmi4mo&feature=youtu.be>
3. Visit <https://examfear.com/> for further reference

Points to remember:

1. Lines which are parallel to the same line are parallel to each other.
2. If a side of a triangle is produced, the exterior angle so formed is equal to the sum of the two interior opposite angles.
3. The sum of three angles of a triangle is 180°

ASSIGNMENT (To be done in the register)

Revise solved example 5, 6 and 8

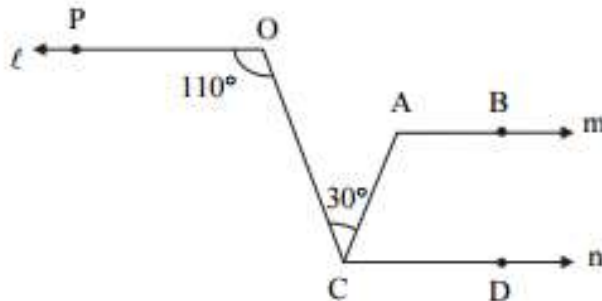
Exercise 6.2 – Question 5

Exercise 6.3 - Question 3 , 4 , 5 ,6

Theorem 6.7

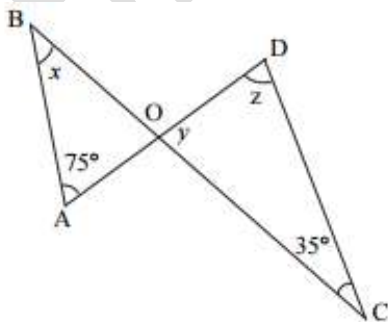
PRACTICE

1. In the given figure, If, line $l \parallel$ line $m \parallel$ line n , then find $\angle CAB$.



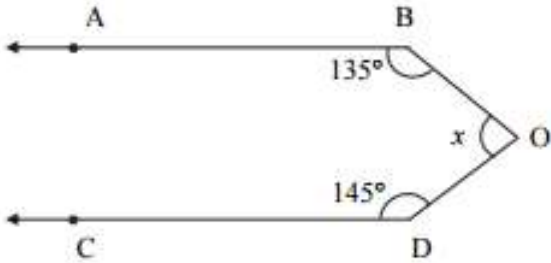
2. State True/False: Lines which are parallel to the same line are parallel to each other.
A) True
B) False

3. In the given figure, $AB \parallel CD$, find the value of 'y'?

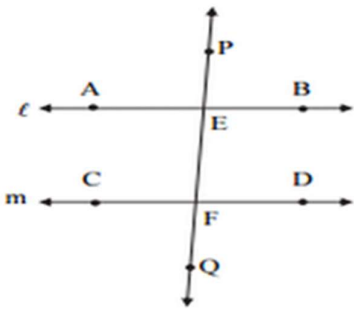


4. Fill in the blanks: If one of the angles of a triangle is 140° , then the sum of the other two angles is _____.

5. In the given figure $AB \parallel CD$. Find the value of x ?



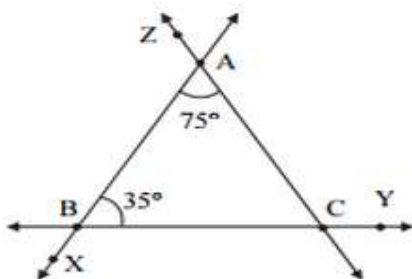
6. In the given figure, line $l \parallel$ line m and line PQ is the transversal. If angle $PEB = 50^\circ$, then find angle DFQ ?



7. State True/False: The sum of the angles of a triangle is 360° .

- A) True
- B) False

8. In the given figure, angle $BAC = 75^\circ$, angle $ABC = 35^\circ$. Find the measures of $\angle ACY$.



PRACTICE ASSIGNMENT :

Lines and Angles

- 1) For what value of $x + y$ in Fig. 6.4 will ABC be a line? Justify your answer.
- 2) Can a triangle have all angles less than 60° ? Give reason for your answer.
- 3) Can a triangle have two obtuse angles? Give reason for your answer.
- 4) How many triangles can be drawn having its angles as 45° , 64° and 72° ? Give reason for your answer.

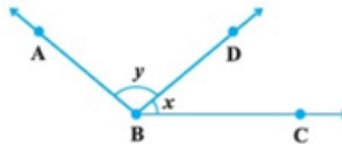


Fig. 6.4

- 5) How many triangles can be drawn having its angles as 53° , 64° and 63° ? Give reason for your answer.
- 6) In Fig. 6.5, find the value of x for which the lines l and m are parallel.
- 7) Two adjacent angles are equal. Is it necessary that each of these angles will be a right angle? Justify your answer.
- 8) If one of the angles formed by two intersecting lines is a right angle, what can you say about the other three angles? Give reason for your answer.
- 9) In Fig. 6.6, which of the two lines are parallel and why?

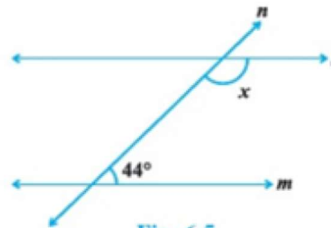


Fig. 6.5

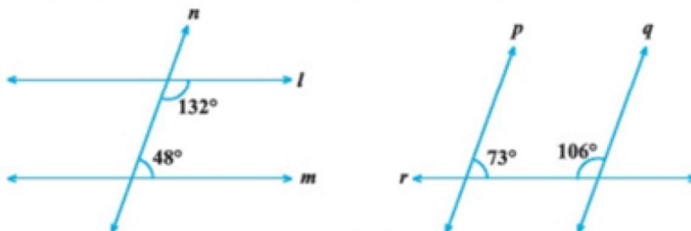


Fig. 6.6

- 10) Two lines l and m are perpendicular to the same line n . Are l and m perpendicular to each other? Give reason for your answer.

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