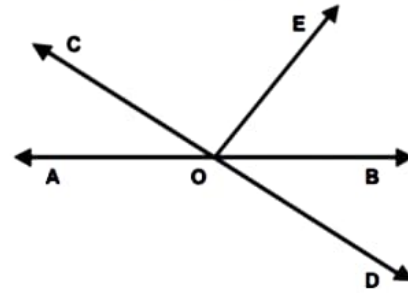


LINES AND ANGLES

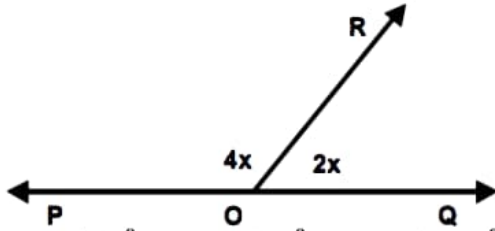
1. In fig. AB and CD intersect each other at O. If $\angle AOC + \angle BOE = 70^\circ$ and $\angle BOD = 40^\circ$ then the value of $\angle BOE$ is

(a) 30° (b) 110° (c) 120° (d) 150°



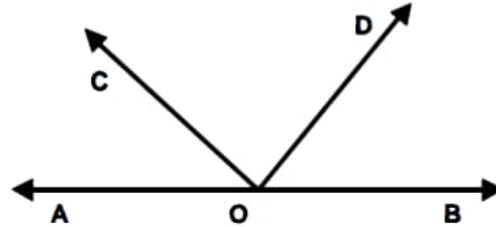
2. In fig. POQ is a line, $\angle POR = 4x$ and $\angle QOR = 2x$ then the value of x is

(a) 50° (b) 20° (c) 30° (d) 90°



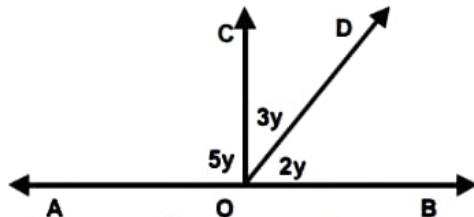
3. In the given fig. $\angle AOC + \angle BOD = 75^\circ$, then the value of $\angle COD$ is

(a) 130° (b) 105° (c) 120° (d) 75°



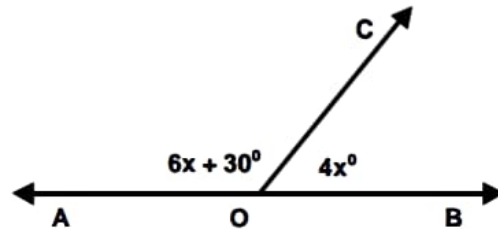
4. In the fig. the value of y is:

(a) 60° (b) 18° (c) 30° (d) 90°



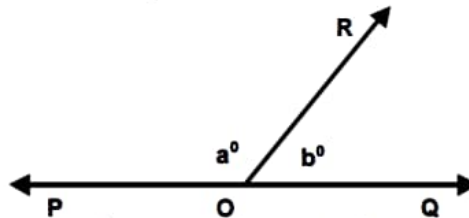
5. In fig., the value of x is:

(a) 60° (b) 15° (c) 30° (d) 45°



6. In fig. $\angle POR$ and $\angle QOR$ form a linear pair if $a - b = 80^\circ$ then values of a and b respectively are:

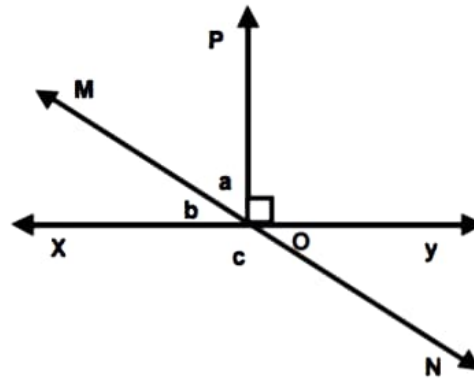
(a) 130° and 50° (b) 50° and 130° (c) 60° and 120° (d) 40° and 140°



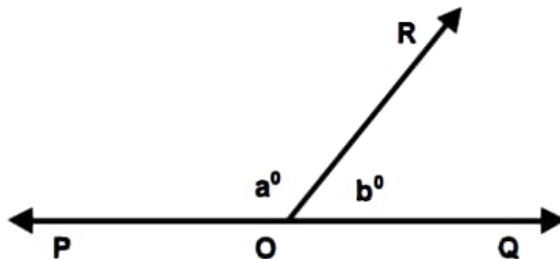
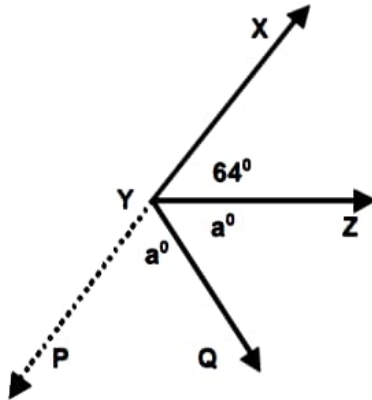
7. For two parallel lines sum of interior angles on the same side of a transversal line is

(a) 100° (b) 180° (c) 90° (d) 360°

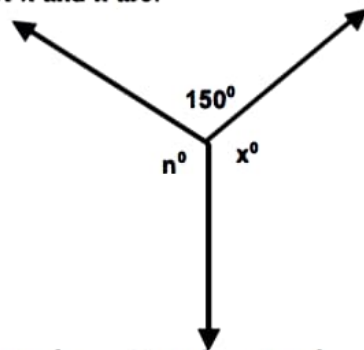
8. In fig., lines XY and MN intersect each other at point O. If $\angle POY = 90^\circ$ and $a : b = 2 : 3$ then the value of $\angle C$ is
 (a) 140° (b) 120° (c) 80° (d) 95°



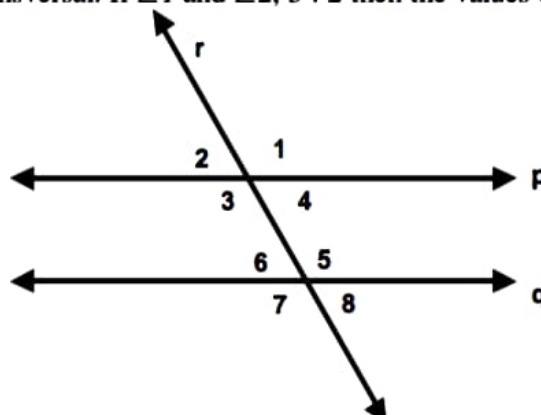
9. In fig. $\angle XYZ = 64^\circ$ and XY is produced to point P. If ray YQ bisect $\angle ZYP$ then the value of $\angle XYQ$ is
 (a) 122° (b) 126° (c) 302° (d) 258°



10. In fig., b is more than one-third of a right angle than a. The values of a and b are:
 (a) 95° and 85° (b) 105° and 75° (c) 60° and 120° (d) 65° and 115°
11. In fig., $n - x = 3^\circ$ then values of x and n are:



- (a) 126° and 129° (b) 125° and 128° (c) 150° and 153° (d) none of these
12. In fig., $q \parallel r$ and p is transversal. If $\angle 1$ and $\angle 2$, $3 : 2$ then the values of $\angle 3$ and $\angle 4$ are:

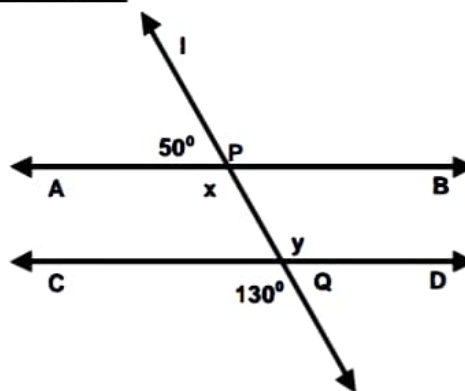
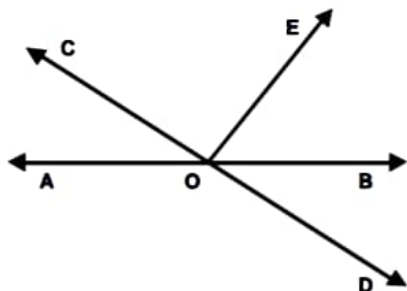


- (a) 108° and 72° (b) 72° and 108° (c) 75° and 105° (d) 85° and 95°

LINES AND ANGLES

1. In fig. the values of x and y are equal to:

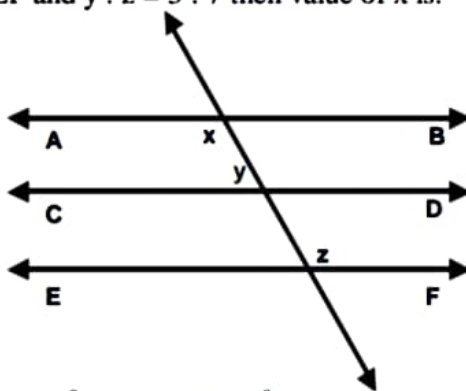
(a) 130° (b) 150° (c) 160° (d) 135°



2. In fig. AB and CD intersect each other at O. If $\angle AOC + \angle BOE = 70^\circ$ and $\angle BOD = 40^\circ$ then the value of $\angle COE$ is

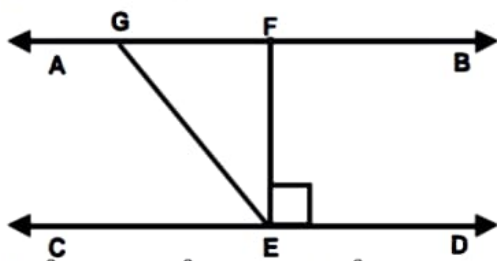
(a) 250° (b) 70° (c) 30° (d) 50°

3. In fig, if $AB \parallel CD$, $CD \parallel EF$ and $y : z = 3 : 7$ then value of x is:



(a) 126° (b) 120° (c) 58° (d) 62°

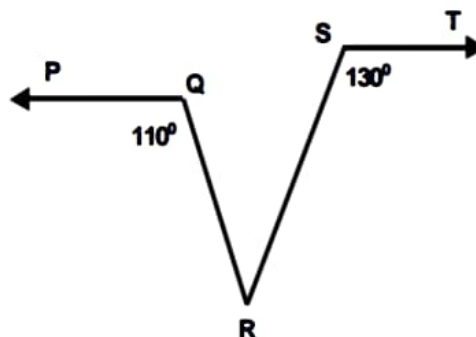
4. In fig, if $AB \parallel CD$, $EF \perp CD$ and $\angle GED = 126^\circ$ then the value of $\angle AGE$ is



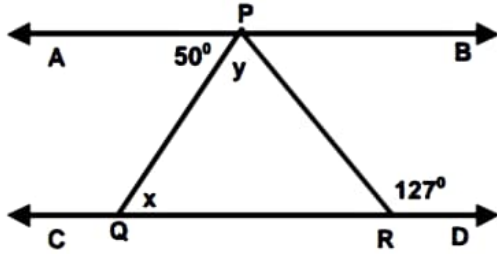
(a) 126° (b) 120° (c) 128° (d) 54°

5. In fig, if $PQ \parallel ST$, $\angle PQR = 110^\circ$ and $\angle RST = 130^\circ$ then the value of $\angle QRS$ is

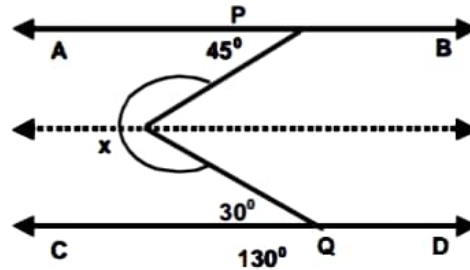
(a) 60° (b) 120° (c) 80° (d) 90°



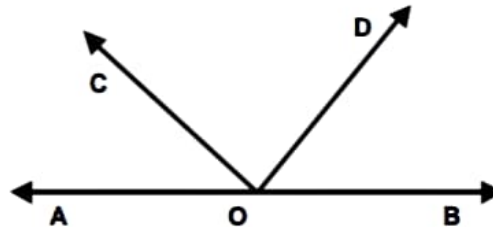
6. In fig., $AB \parallel CD$, $\angle APQ = 50^\circ$, $\angle PRD = 127^\circ$, then the value of x and y respectively are
 (a) 50° and 77° (b) 40° and 85° (c) 60° and 90° (d) 85° and 75°



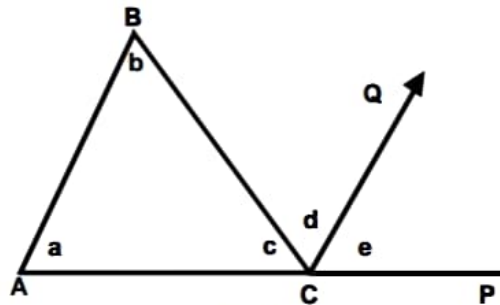
7. In fig, $AB \parallel CD$, the value of x is:
 (a) 185° (b) 280° (c) 285° (d) 195°



8. In fig, if $\angle AOC$, $\angle COD$ are equal and $\angle BOD$ is a right angle, then the values of $\angle AOC$ and $\angle COD$ are:
 (a) 60° (b) 30° (c) 45° (d) 90°

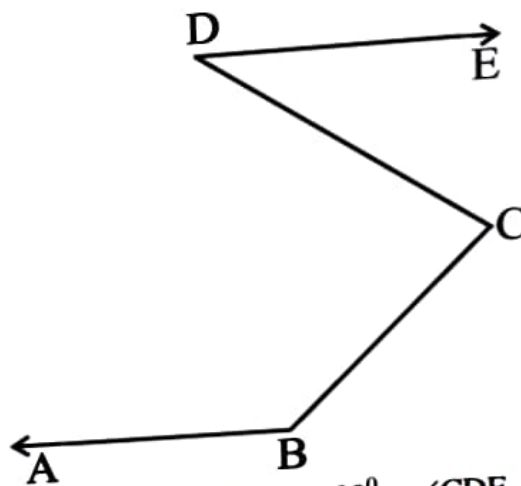
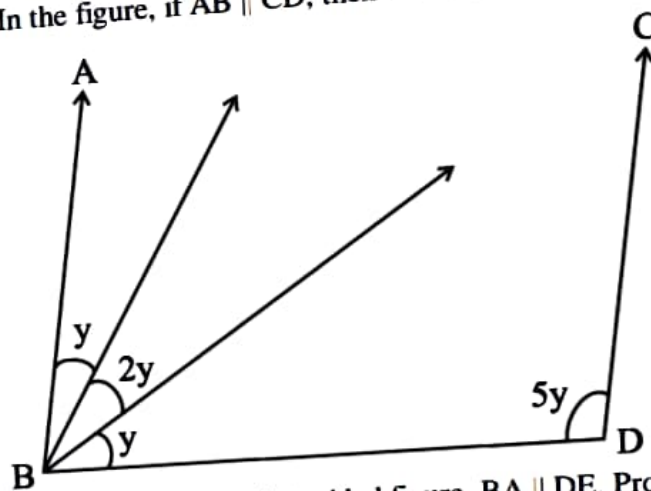


9. In fig, the sum of $\angle a$ and $\angle b$ is:
 (a) $\angle c + \angle d$ (b) $\angle d + \angle e$
 (c) $\angle b + \angle c$ (d) $\angle a + \angle c$



10. In triangle interior opposite angle is always less than:
 (a) any angle of the triangle (b) opposite angle
 (c) right angle (d) exterior angle
11. In a triangle sum of two interior opposite angles is always equal to:
 (a) third angle (b) opposite angle
 (c) right angle (d) none of these
12. In a triangle exterior angle is always greater than:
 (a) third angle (b) interior opposite angles
 (c) right angle (d) none of these

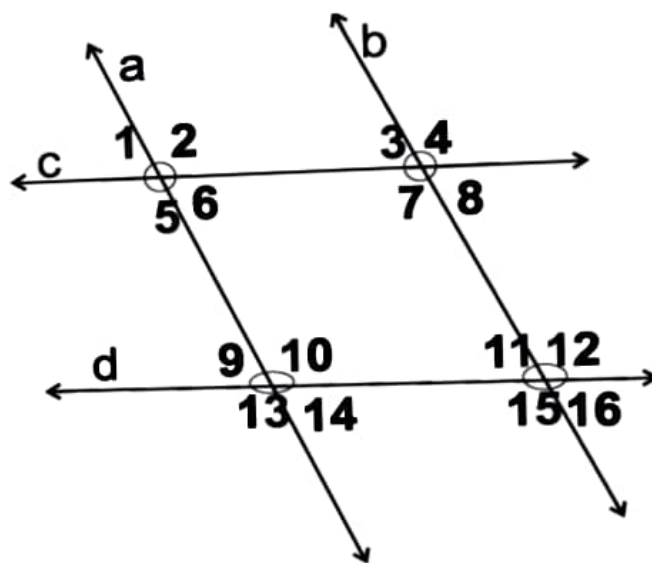
1. In the figure, if $AB \parallel CD$, then what is the value of y .



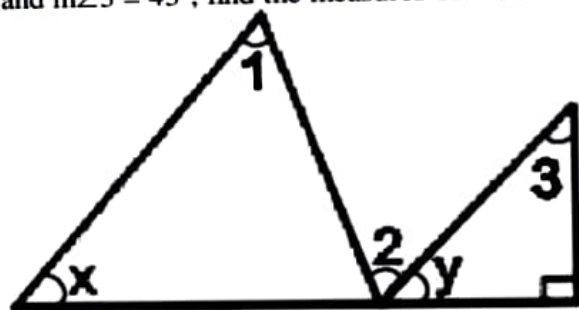
2. In the given above right sided figure, $BA \parallel DE$. Prove that $\angle ABC + \angle BCD = 180^\circ + \angle CDE$

3. In the given figure $a \parallel b$ and $c \parallel d$.

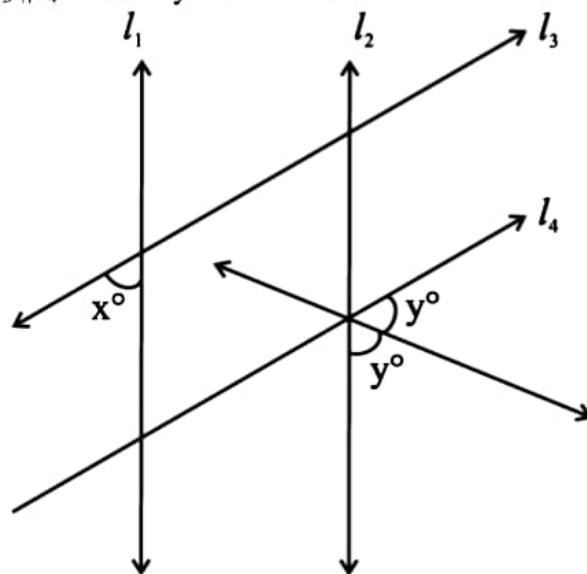
- Name all the angles equal to $\angle 5$. Justify the your answer
- Name all angles supplementary to $\angle 8$. Justify the your answer
- If $\angle 4 = 110^\circ$, then find all other angles. What all properties of parallel lines you have used here?



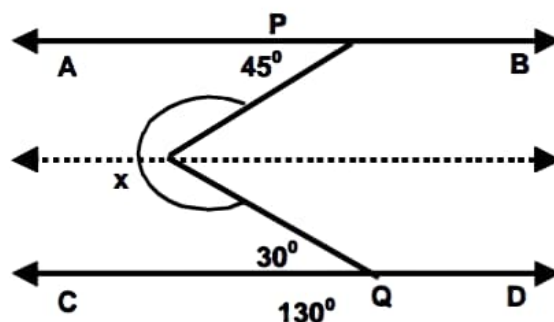
4. If $m\angle 1 = 53^\circ$, $m\angle 2 = 65^\circ$ and $m\angle 3 = 43^\circ$, find the measures of $\angle x$ and $\angle y$. Justify your answer.



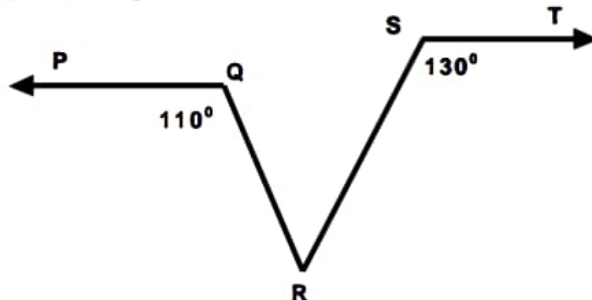
5. In figure, if $l_1 \parallel l_2$ and $l_3 \parallel l_4$. What is y in terms of x ?



6. In fig, find the value of x

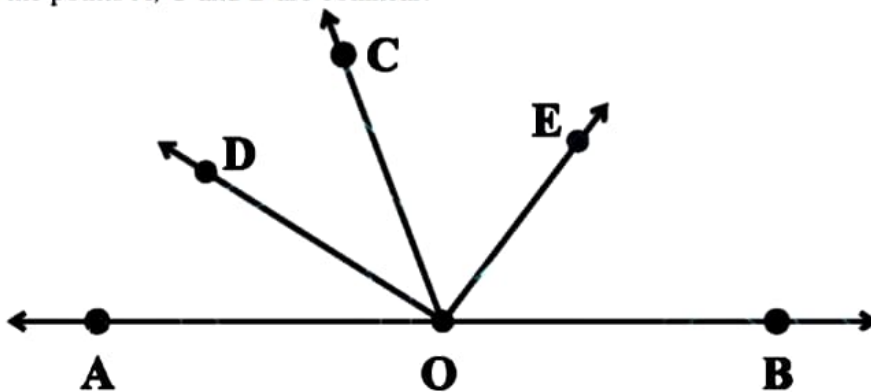


7. In fig, if $PQ \parallel ST$, $\angle PQR = 110^\circ$ and $\angle RST = 130^\circ$ then find the value of $\angle QRS$.

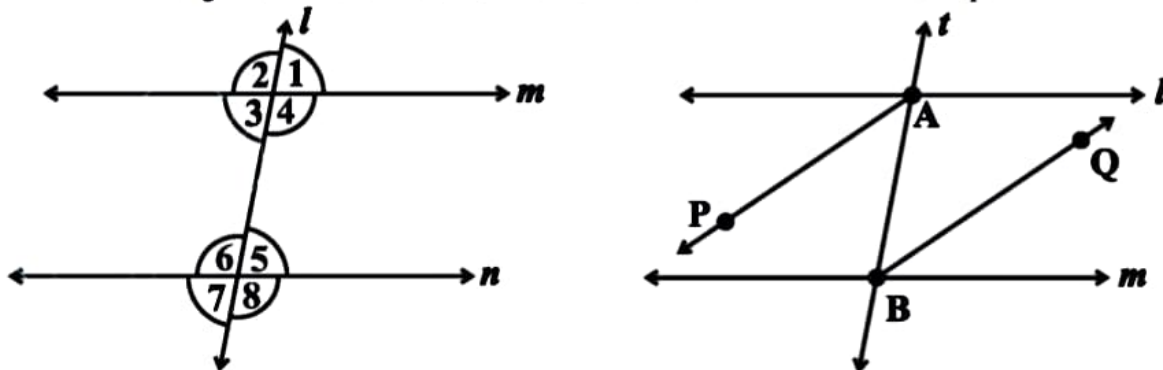


8. An angle is greater than 45° . Is its complementary angle greater than 45° or equal to 45° or less than 45° ?
9. Prove that "The sum of all interior angles of a triangle is 180° ".
10. One of the angles of a triangle is 80° and the other two angles are equal. Find the measure of each of the equal angles.
11. The three angles of a triangle are in the ratio 1:2:1. Find all the angles of the triangle.

38. In the below Figure, OD is the bisector of $\angle AOC$, OE is the bisector of $\angle BOC$ and $OD \perp OE$. Show that the points A, O and B are collinear.



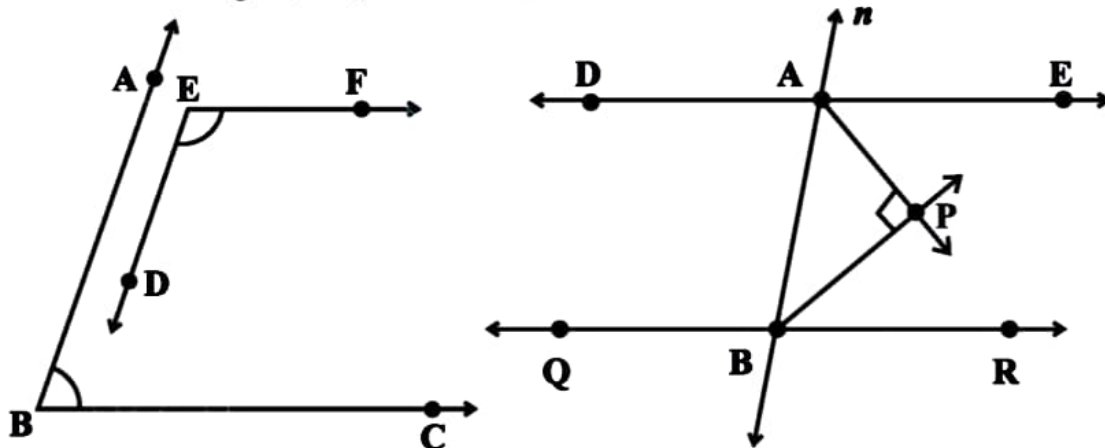
39. In the below Figure, $\angle 1 = 60^\circ$ and $\angle 6 = 120^\circ$. Show that the lines m and n are parallel.



40. AP and BQ are the bisectors of the two alternate interior angles formed by the intersection of a transversal t with parallel lines l and m (see above right sided Figure). Show that $AP \parallel BQ$.

41. If in the above right sided Figure for Q40, bisectors AP and BQ of the alternate interior angles are parallel, then show that $l \parallel m$.

42. In the below Figure, $BA \parallel ED$ and $BC \parallel EF$. Show that $\angle ABC = \angle DEF$



43. In the above right sided Figure, $DE \parallel QR$ and AP and BP are bisectors of $\angle EAB$ and $\angle RBA$, respectively. Find $\angle APB$.