

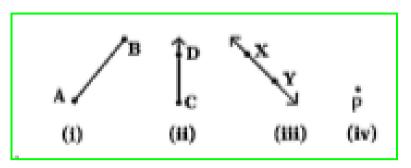
MATHS

NCERT - NCERT Maths(TELUGU)

LINES AND ANGLES



1. Name the figures drawn below.





2. Draw the figure: \overrightarrow{OB}



3. Draw the figure: Point X



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4. Draw the figure: \overrightarrow{RS}

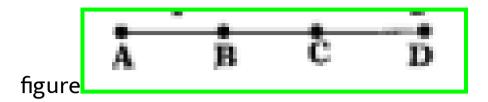


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5. Draw the figure: \overline{CD}

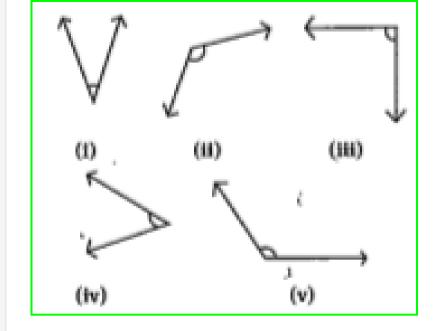


6. Name all the possible line segments in the





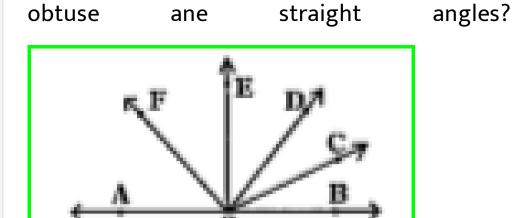
7. Identify the following given angles as acute, right or obtuse.





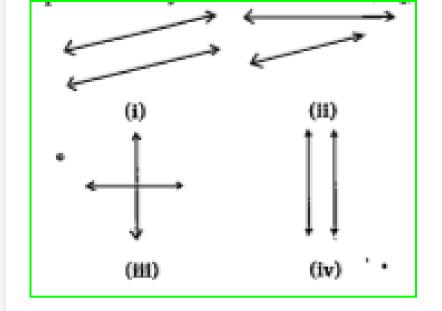
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8. Name all the possible angles you can find in the following figure. Which are acute, right,





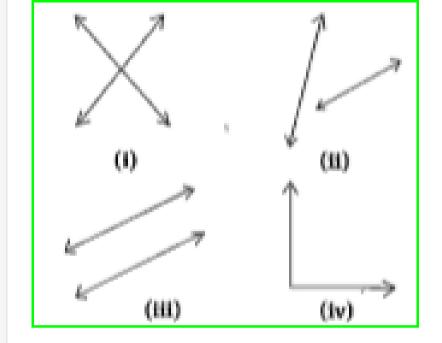
9. Which of the following pairs of lines are parallel? Why?





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10. which of the following lines are intersecting?





11. Draw the following: \overrightarrow{AB}

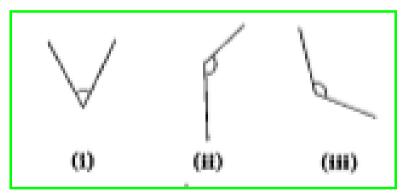


12. Draw the figure: \overline{CD}



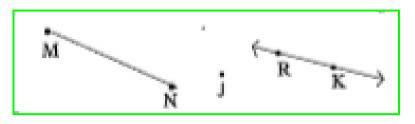
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13. Identify the following angles





14. Name the figures drawn below.



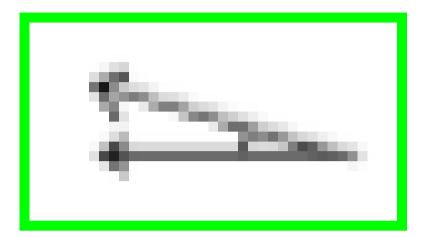






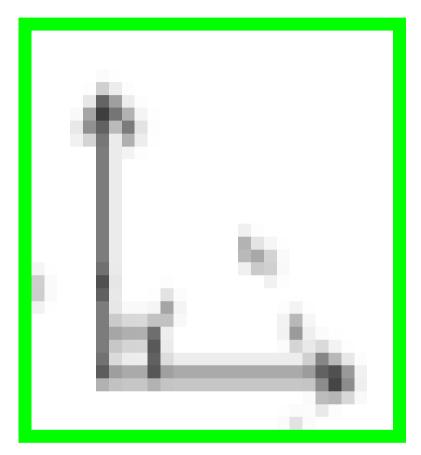


16. is an example for_____





17. is an example of____angle.





18. The point 'Z' can be represented as



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19. $x+y=90^{\circ}$ then x and y are called____angles.



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20. 89° is not___angle.

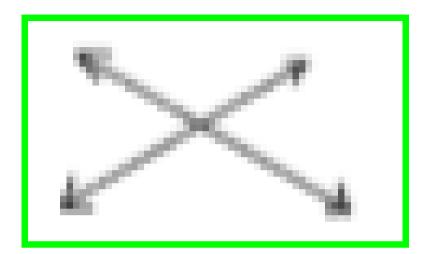








represents____lines.





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23. Number of points on a line is_____

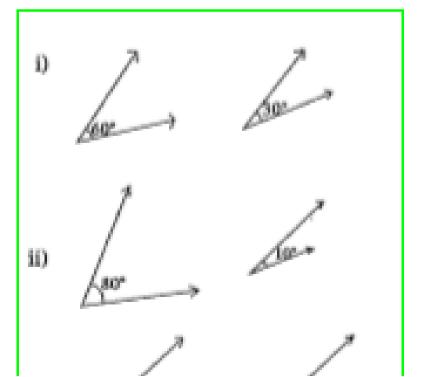


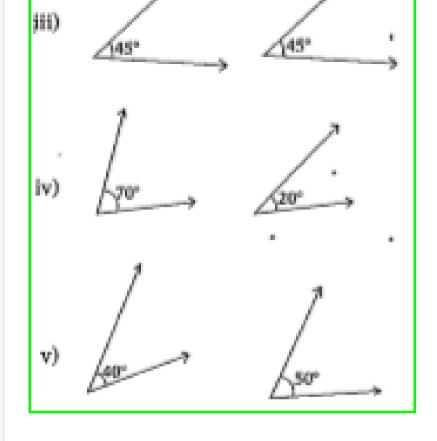
24. (fill in the blanks) Line segment is a part of .



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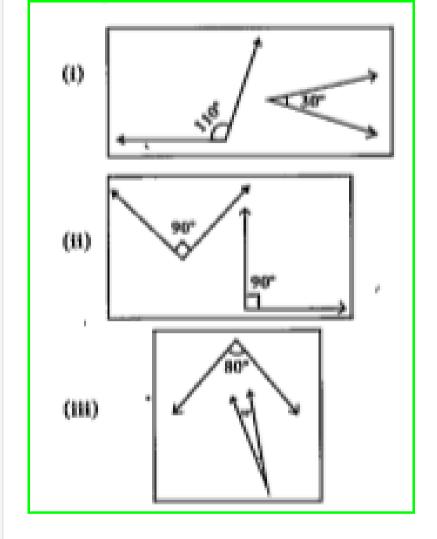
25. identify the complementary angles .







26. which of the following pairs of angles are complementary?





27. Find the complementary angle : 25°



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28. Find the complementary angle : 40°



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29. Find the complementary angle : 89°



30. Find the complementary angle : 55°



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31. If two angles are complement to each other and are equal, then the angles are?



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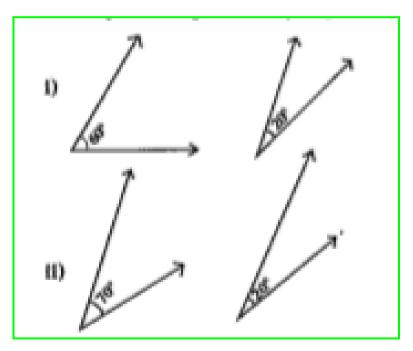
32. Manasa says, "Each angle in any pair of complementary angles is always acute". Do you

agree? Give reason.



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33. Identify the complementary angles.





34. Find the complementary angle : 87°



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35. Find the complementary angle : 40°



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36. Find the complementary angle : 22°



37. Two angles are complement to each other one of the angle is 32° then find other angle.



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38. Can two right angles be complementary?



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39. Complement of 30° is _____





41. Draw the complementary angle of 50degrees____



42. Right angle contains _____



43. 30° is a measure of ____ angle.



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44. Complement of x° is

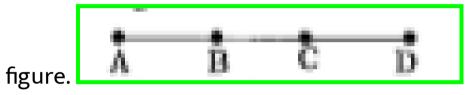


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45. 70° and 40° are not____angles.

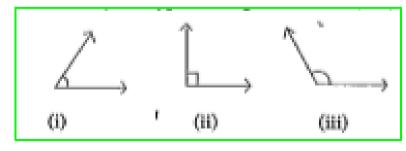


46. Name the possible line segment in the

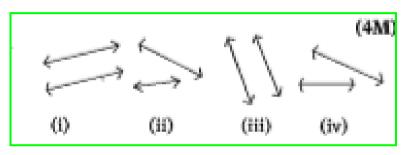




47. Identify the types of angles.



48. Which of the following lines are parallel.





49. Find the complement of 43°



50. If two angles are complement to each other and are equal, then the angles are?



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51. Write any five pairs of supplementary angles of your choice.



52. Find the supplementary angles of the given angles $105\,^\circ$



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53. Find the supplementary angles of the given angles 95°



54. Find the supplementary angles of the given angles 150°



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55. Find the supplementary angles of the given angles $20\,^\circ$



56. Two acute angles cannot form a pair of supplementary angles. Justify.



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57. If two angles are equal and supplement to each other, then they are ____.



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58. Find the supplementary angle of 100°



59. The supplementary angle of 70° is-



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60. Two acute angles cannot form a pair of supplementary angles. Give example.

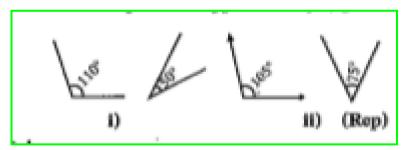


61. Two angles are supplementary and if one of the angle is 72° then find the other angle.



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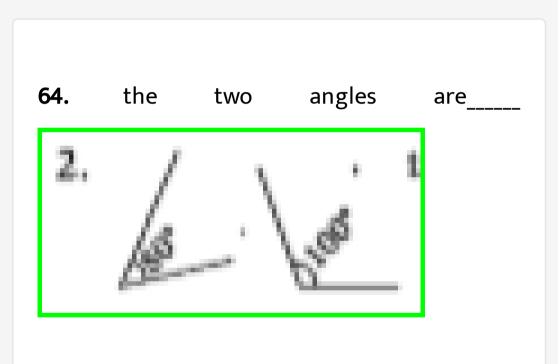
62. Find the pairs of supplementary angles





63. The Supplementary angle of 125° is _____

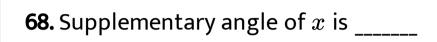




65. 70° is the supplementary angle of
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66. Supplementary angle of 90° is
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67. Two angles are supplement to each other, if

one of the angle is $40\,^\circ\,$ then other angle is



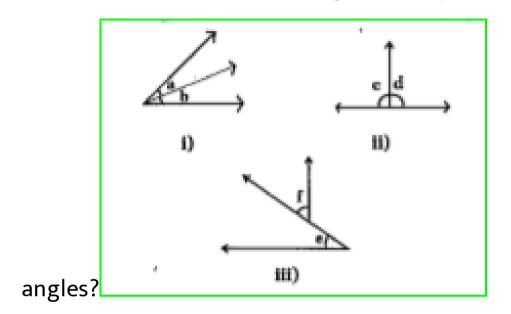




69. Supplementary angle of 2° is _____



70. Which of the following are adjacent

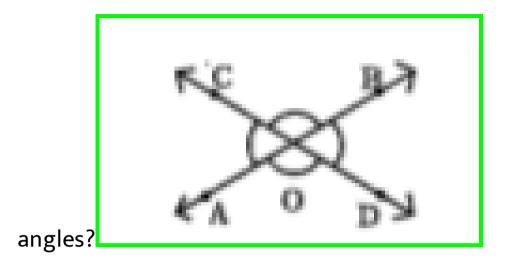




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71. Name all pairs of Adjacent angles. In the figure. How many pairs of adjacent angles are

formed? Why these angles are called adjacent





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72. Can two adjacent angles be supplementary

? Draw figure.



73. Can two adjacent angles be complementary? Draw figure.

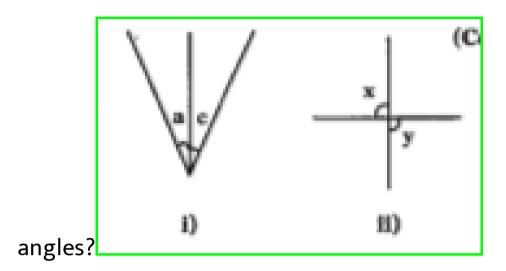


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74. Give four examples of adjacent angles in daily life. Example: Angles between the spokes at the centre of a cycle wheel. (i) ___ (ii) ___ (iii) ___ (iv)____



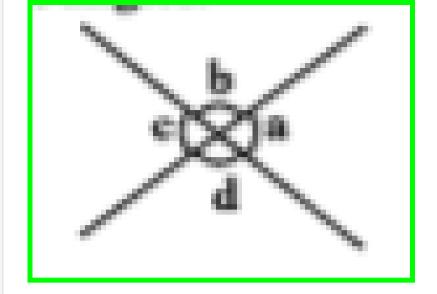
75. Which of the following are adjacent





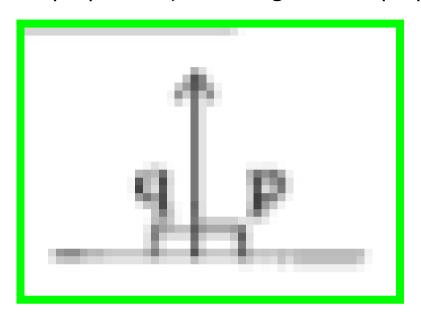
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76. In the following figure write the pairs of adjacent angles.





77. p, q are adjacent angles then p+q=_____





78. x, y are the examples of____angles.





79. The angles having a common arm and common vertex are called ____ angles.

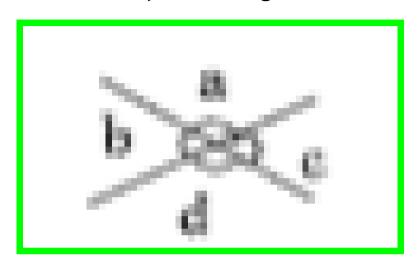


80. The angle adjacent to a is_____





81. The adjacent angles to a are_____





82. The supplementary angle of 35° is



83. Find the supplementary angle of 40°

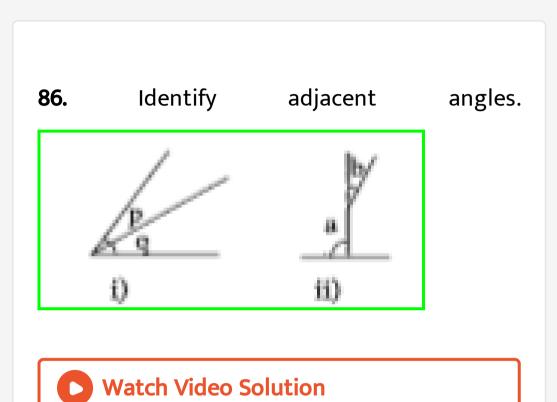


84. Two obtuse angles can not form a pair of supplementary angles. Justify.



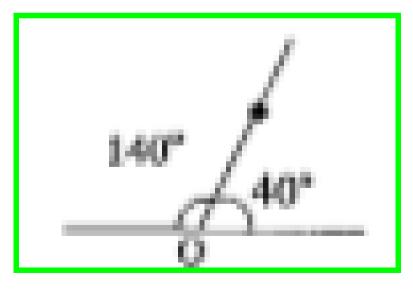
85. If two angles are equal and supplement to each other, then they are ____.





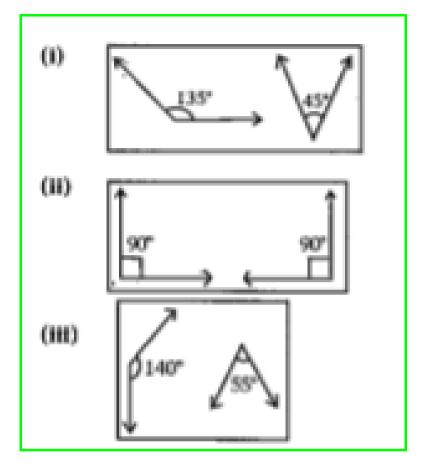
87. Write any four pairs of supplementary angles.

88. Two adjacent angles are 40degrees and 140degrees.Do they form a linear pair? Draw a picture and check. Renu draw the pictures like this. Has she drawn correctly? Do these adjacent angles form a linear pair?



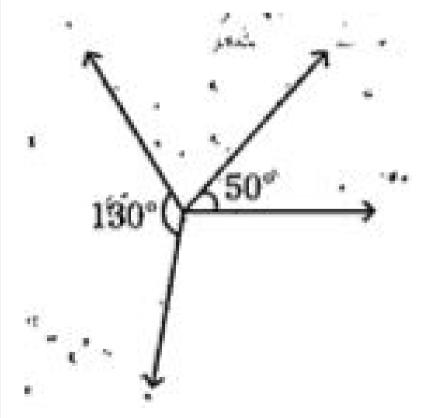
89. Draw the following pairs of angles as adjacent angles. Check whether they form

linear pair.



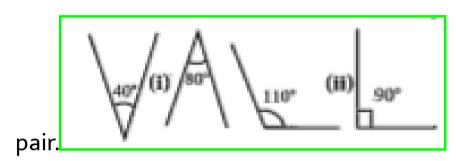


90. Niharika took two angles 130° and 50° and tried to check whether they form linear pair. She made the following picture. Can we say that these two augles do not for a linear pair ?If not, what is Niharika's mistake?





91. Verify which of the following form a linear





92. Draw 40° and 140° to form a linear pair



93. Which of the following pairs of angles form a linear pair. 70° , 100°



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94. Which of the following pairs of angles form

a linear pair: $130^\circ, 50^\circ$



95. Two angles form a linear pair and if one of the angle is 60° then other angle is ____



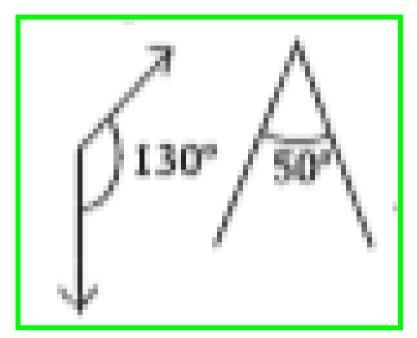
96. The Supplement of 92° is _____



97. The Complement of 40° is _____

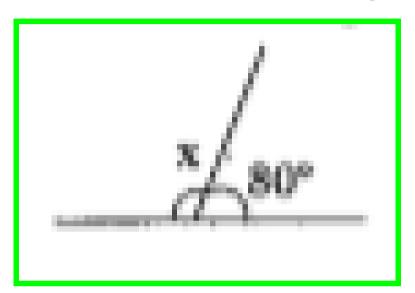


98. The two angles form_____





99. The value of x in the figure=_____

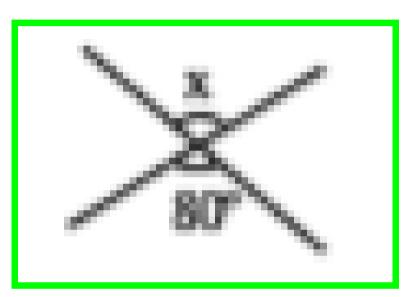




100. The sum of two angles is 180° . Then they are called __angles.

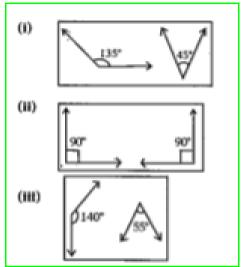


101. Find the value of x in the figure.





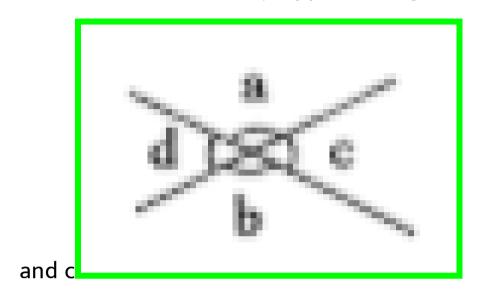
102. Check the following form linear pair or



not.

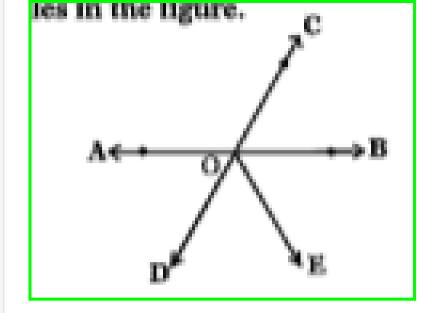


103. Name the vertically opposite angles to a



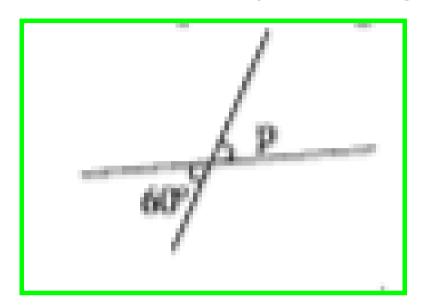


104. Name two pairs of vertically opposite angle in the figure.



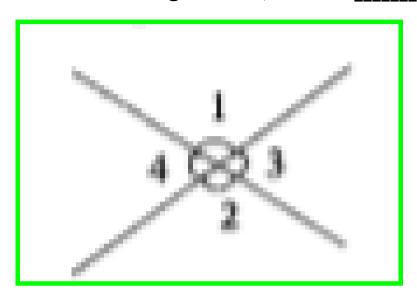


105. The value of p in the figure_____



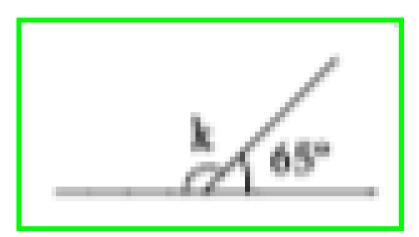


106. In the figure $\angle 1, \angle 2$ are____angles.





107. The value of k in the figure____

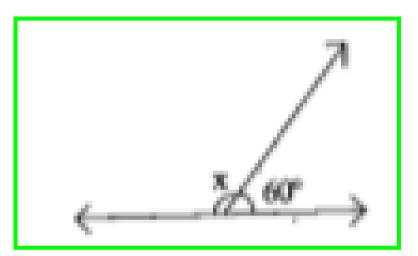




108. When two lines intersect the _____angles are equal.

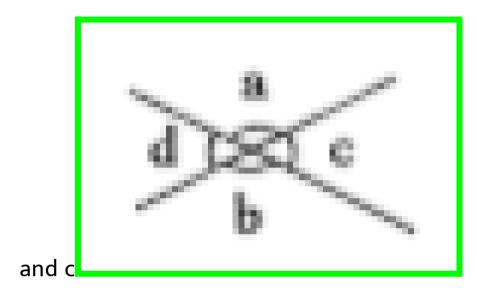


109. Find the value of x in the figure



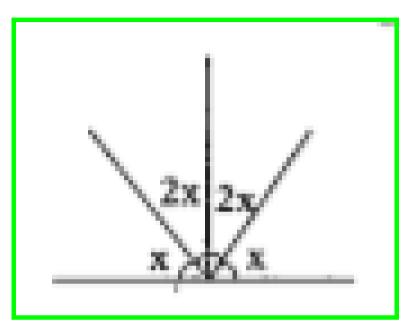


110. Name the vertically opposite angles to a





111. Find the value of x in the figure





112. Complement of 50° is_____



113. Supplement of 100° is_____

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114. Right angle means_____



115. Straight angle means......

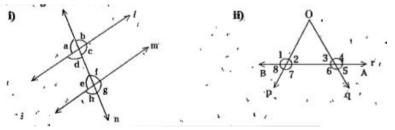


116. How many transversals can be drawn for two distinct lines?



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117. Identify the transversal in figure (i) and (ii).Identify the exterior and interior angles andthe table given below



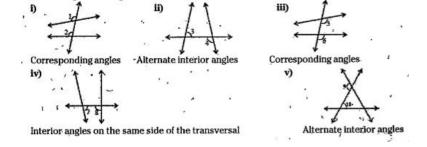


118. Consider the following lines. Which line is a transversal? Number and list all the angles" formed. Which are the exterior angles and which are the interior angles?



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119. Name the pairs of angles in each figure by their property.





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120. Fill the table with the measures of the corresponding angles. Find out in which figure the pairs of corresponding angles are equal. What can you say about the lines 'I' and 'm'? What can you say about the lines 'p' and

'q'?Which pair of lines are parallel?

Fig.	Pairs of corresponding angles			
	1 st pair	2 nd pair	.3 rd pair	4 th pair
Ð	∠1 = <u>105</u> °	∠2 = <u>75</u> °	∠3 = <u>105</u> °	∠4 = <u>75</u> °
	∠5 = <u>105</u> °	∠6 = <u>75</u> °	∠7 = <u>105</u> °	∠8 = <u>75</u> °
.ii)	∠1 = <u>115</u> °	∠2 = <u>65</u> °	∠3 = <u>115</u> °	∠4 = <u>65</u> °
	∠5 = <u>105</u> °	.∠6 = <u>75</u> °	∠7 = <u>105</u> °	∠8 = <u>75</u> °



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121. Fill the table with the measures of the corresponding angles. Find out in which figure the pairs of corresponding angles are equal. What can you say about the lines 'l' and 'm'? What can you say about the lines 'p' and

'q'?Which pair of lines are parallel?

Fig.	Pairs of corresponding angles			
	1 st pair	2 nd pair	.3 rd pair	4 th pair
D	∠1 = <u>105</u> °	∠2 = <u>75</u> °	∠3 = <u>105</u> °	∠4 = <u>75</u> °
	∠5 = <u>105</u> °	∠6 = <u>75</u> °	∠7 = <u>105</u> °	∠8 = <u>75</u> °
.ii)	∠1 = <u>115</u> °	∠2 = <u>65</u> °	∠3 = <u>115</u> °	∠4 = <u>65</u> °
	∠5 = <u>105</u> °	.∠6 = <u>75</u> °	∠7 = <u>105</u> °	∠8 = <u>75</u> °



122. Fill in the blanks: The lines which intersects two or more lines at distinct points is called____



123. Fill up the blanks : If the pair of alternate Interior angles are equal, then the lines are .



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124. Fill up the blanks: The sum of Interior angles on the same side of the transversal are supplementary, then the lines are ____.

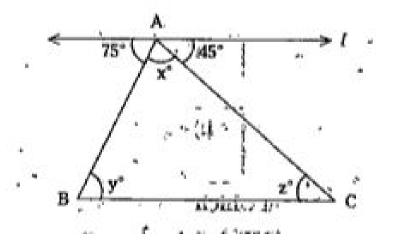


125. Fill in the blanks:If two lines intersects each other then the number of common points they have



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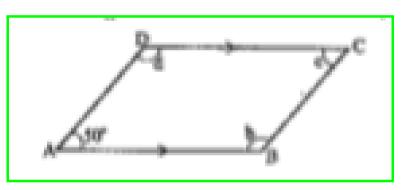
126. Find the measures of x, y and z in the figure, where L// BC.





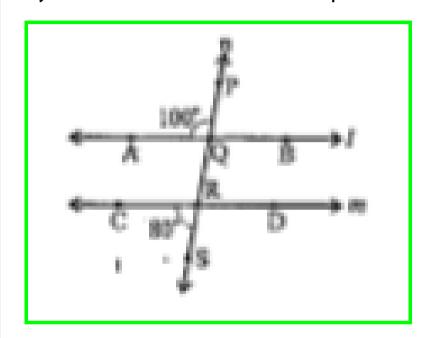
127. ABCD is quadrilateral in which

 $AB||DC ext{ and } AD||BC. ext{ Find } extstyle \angle b, \angle c, \angle d.$





128. In a given figure, 'l' and 'm' are intersected by transversal 'n'. Is I parallel to m?



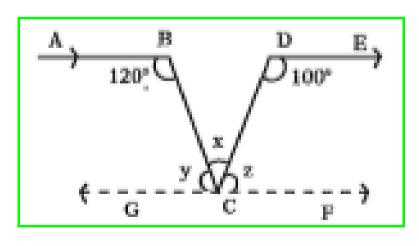


129. Find $\angle a, \angle b, \angle c, \angle d, \angle e$ in the figure?

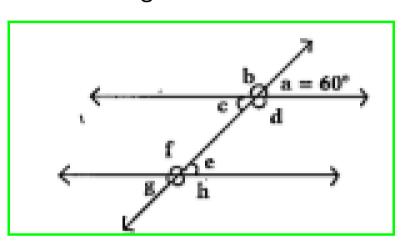




130. In the adjacent figure find x, y, z.

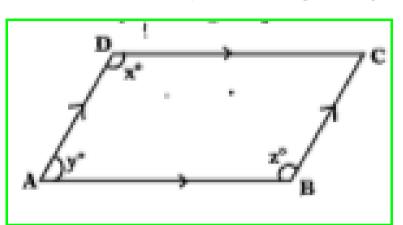


131. In the figure $a=60^{\circ}$ find other angles.



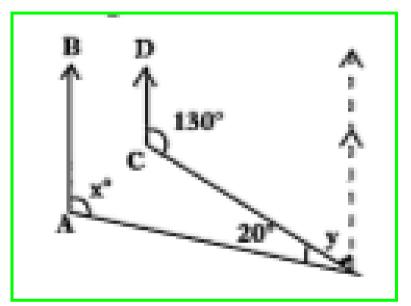


132. In the adjacent fugure prove x=z.



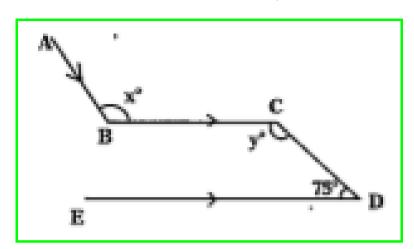


133. In the figure find x.



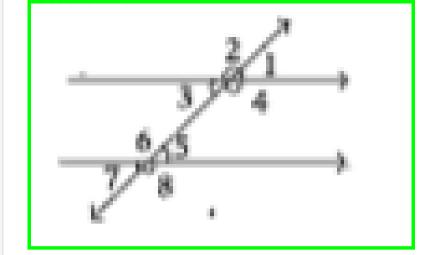


134. Find x and y in the figure.



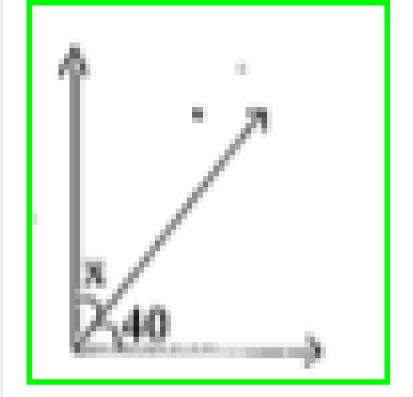


135. In the figure $\angle 1: \angle 2 = 4:5$ all other angles are___





136. The value of x is _____.



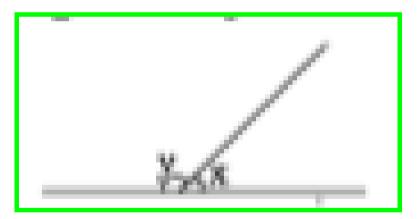
137. Complement of 52° is _____



138. Supplement of 111° is _____







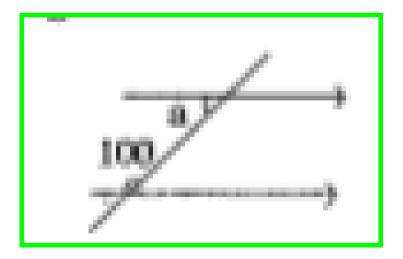


140. If two angles are equal and supplement to each other, then they are ___.

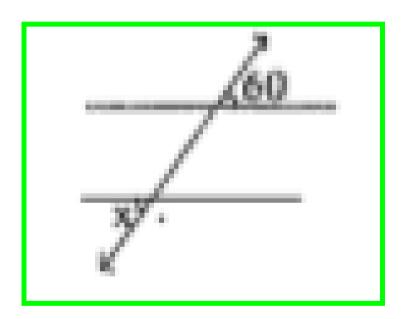


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141. In the figure, Value of $a = \underline{\hspace{1cm}}$

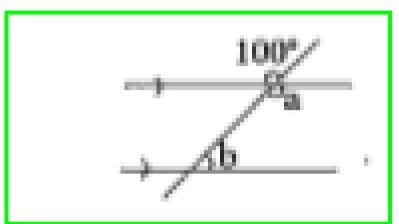


142. In the figure, Value of x =____.



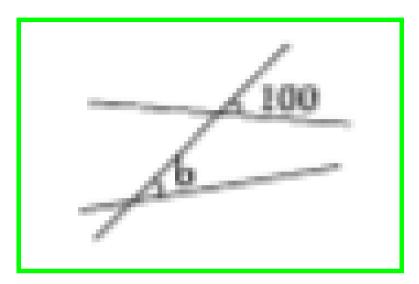


The value of 143. a=





144. The value of b is=____

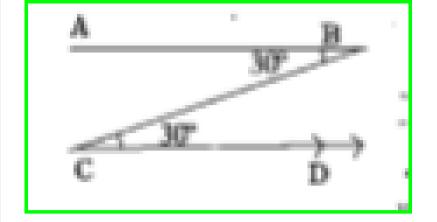




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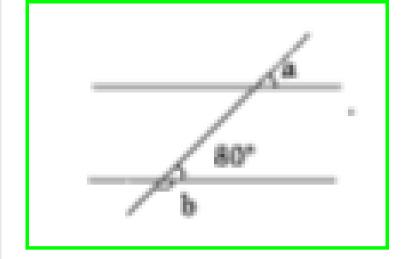
145. In the figure two angles are marked as

 30° each is $AB \mid \mid CD$? How



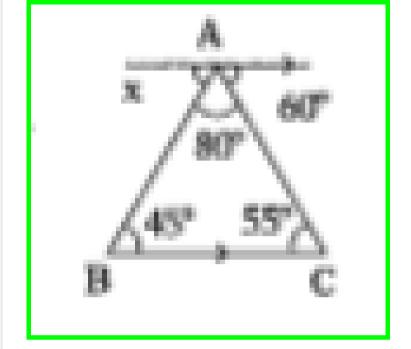


146. Find the Value of a and b in the figure.



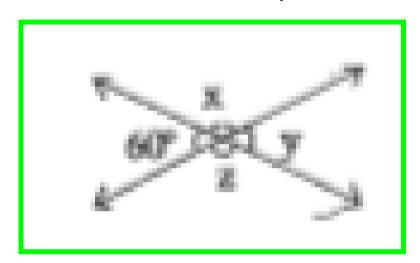


147. Find the Value of x in figure.





148. Find the value of x, y and z in the figure.





149. Fill in the blanks : Two angles are complementary then their sum is ____



150. Fill in the blanks : Supplement of $80\,^\circ$ is



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151. Fill in the blanks: If a transversal intersects two lines then number of angles formed is



152. Fill in the blanks : If $a+b=180^{\circ}$ then a and b are called ____ angles.



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153. Which of the following represents line segment?

A. CD

 $\mathsf{B.}\,\overline{CD}$

 $\mathsf{C}.\overrightarrow{CD}$

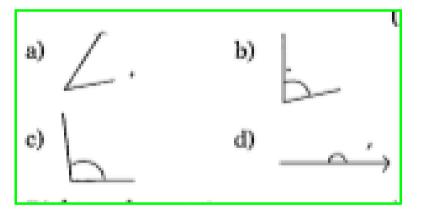
D. None

Answer:



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154. Which of the following is an acute angle?





155. Right angle contains _____

A. $25\,^\circ$

B. 80°

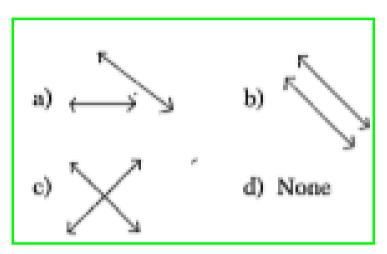
C. 60°

D. 90°

Answer:



156. Which of the following are parallel lines?





157. Angle between any two parallel lines is

•••••

A. 60°

B. 20°

C. 0°

D. 90°

Answer:



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158. Which of the following pair of angles are complementary?

A. 63° , 12°

 $\mathsf{B.\,80}^{\circ}\,,\,10^{\circ}$

C. 60° , 20°

D. None

Answer:



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159. Supplement of 80° is _____

A. 100°

B. 80°

- C. 85°
- D. 101°

Answer:



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160. The angles having a common arm and common vertex are called ___angles.

- A. Adjacent
- B. Acute

C. Right

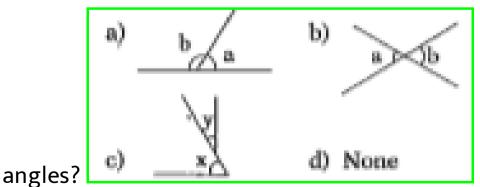
D. None

Answer:



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161. Which of the following are adjacent





162. Fill in the blanks: The lines which intersects two or more lines at distinct points is called____

A. Parallel

B. Perpendicular

C. Transversal

D. None

Answer:



163. Supplement of 60° is



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164. Complement of 80° is



165. The value of $a = \underline{\hspace{1cm}}$.





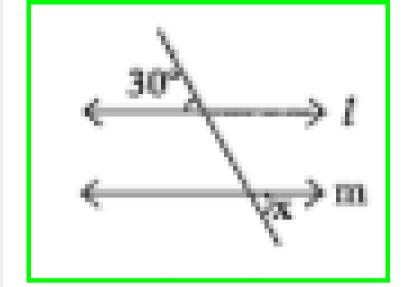
166. The value of $x = _{---}$.



0

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167. In the figure x =_____





168. If two angles are equal and supplement to each other, then they are ___.



169. If two angles are complement to each other and are equal, then the angles are?



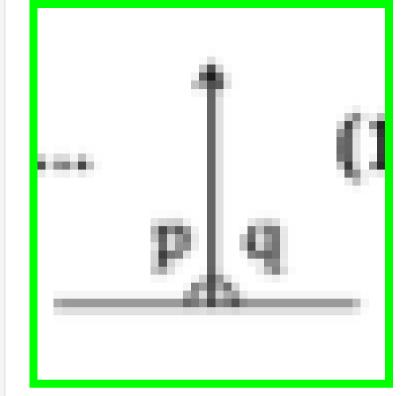
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170. Supplement of 155° is _____



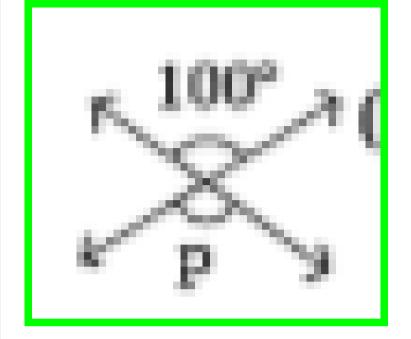
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171. The value of p + q =_____.

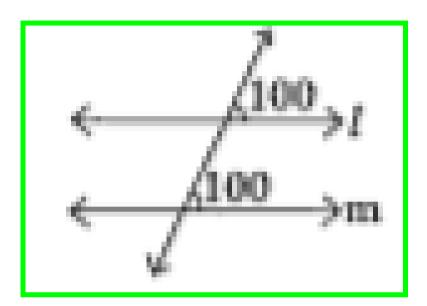




172. The value of $p = ___$.



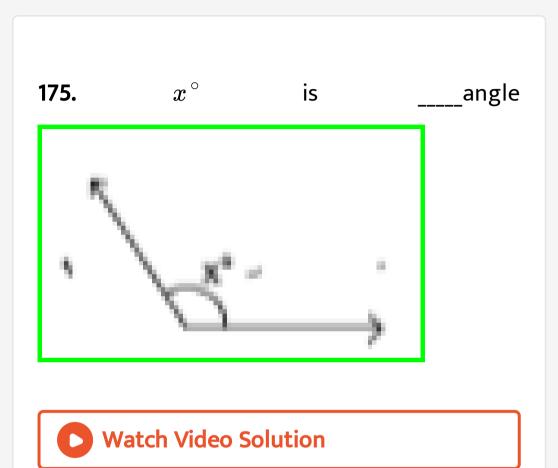






174. The sum of two angles is 90° . Then they are called ___angles.





176. Complementary angle of 41° is 80° ? (TRUE/FALSE)

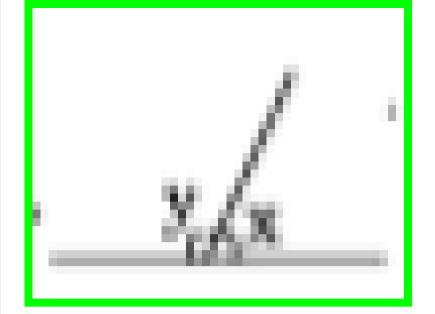


177. 130° and 100° are not supplementary as their sum is not equal to____



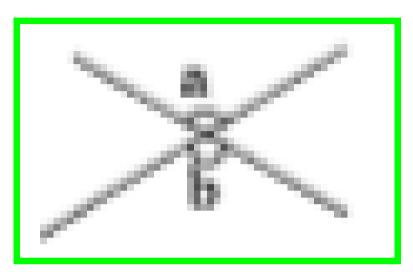
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178. In the figure two angles, x and y are called angles



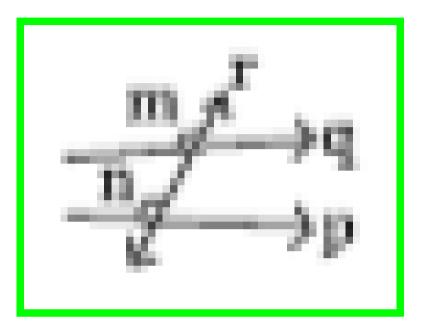


179. In the figure a=b as they are ____angles





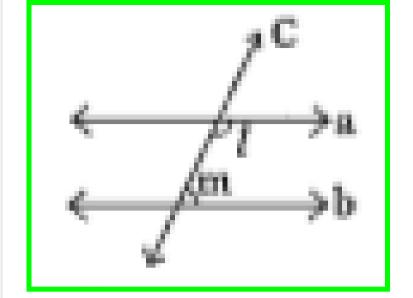
180. m, n are called___angles.





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181. The Value of l+m= _____.

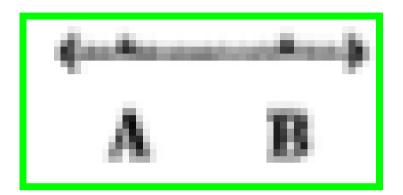




182. (Fill in the blank) Two right angles always____to each other.



183. The Figure below represents



A. Line

B. Line segment

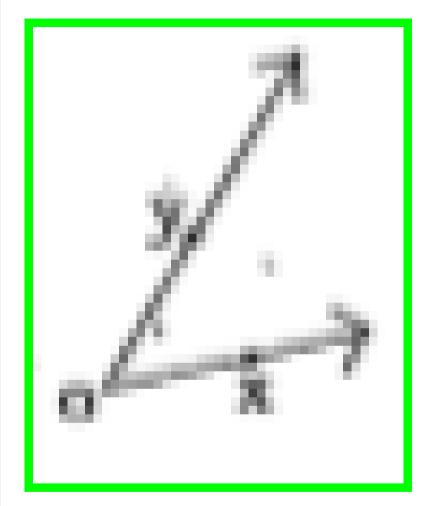
C. Circle

D. None

Answer:



184. The vertex in the figure



 $A. \rightarrow$

В. у

C. x

D. 0

Answer:



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185. Which of the following are supplementary angles?

A. 180° , 10°

B. 160° , 29°

C. 80° , 100°

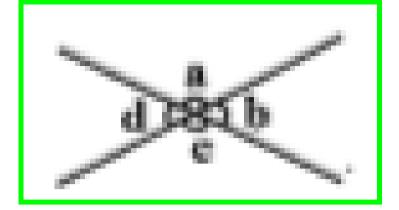
D. 100° , 90°

Answer:



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186. The vertical angle opposite to c is _____ .



A. d

B. 0

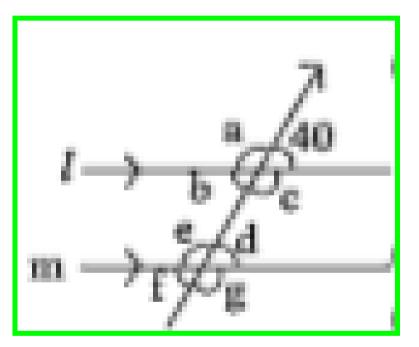
C.b

D. a

Answer:

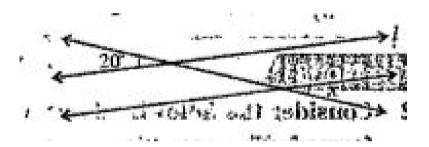


187. In the adjacent figure Angle c=____Angle a=____Angle b=___Angle d=____Angle e=___Angle g=___Angle f=___





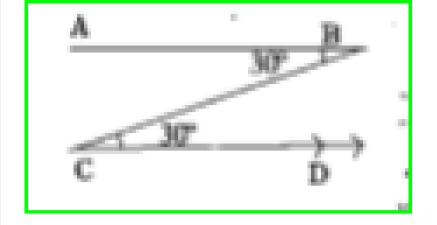
1. In the figure given below, T and 'm' are a pair of parallel lines 'p' is a transversal. Find 'x'.





2. In the figure two angles are marked as 30°

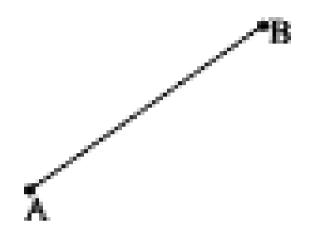
each is $AB \mid \mid CD$? How





Exercise 1

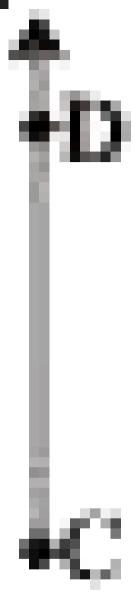
1. Name the figures drawn below.





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2. Name the figures drawn below.



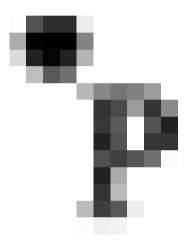


3. Name the figures drawn below.





4. Name the figures drawn below.





5. Draw the figures for the following : \overline{OP}



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6. Draw the figures for the following: Point X



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7. Draw the figures for the following : \overline{RS}



8. Draw the figures for the following : \overline{CD}



9. Name all the possible line segments in the figure.

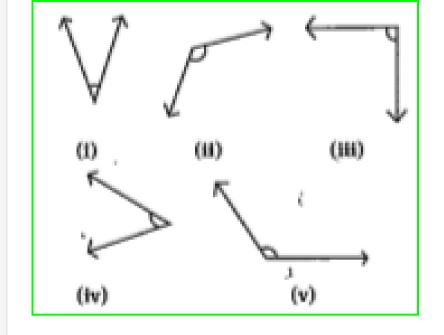




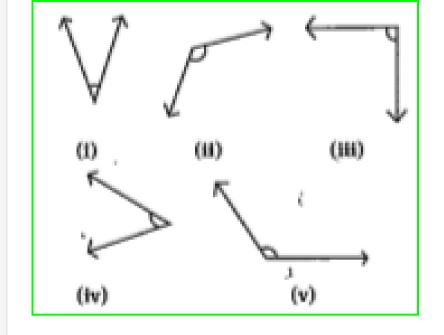
10. Write any five examples of angles that you have observed around. Example: The angle formed when a scissor is opened.



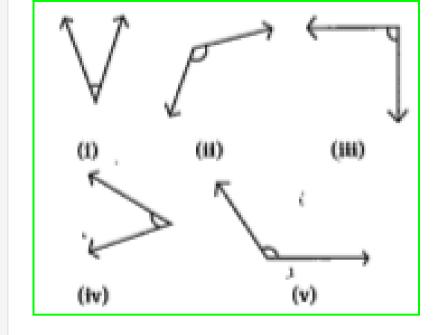
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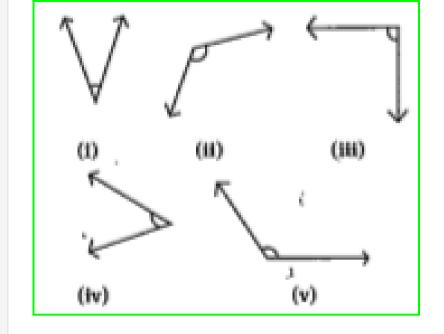




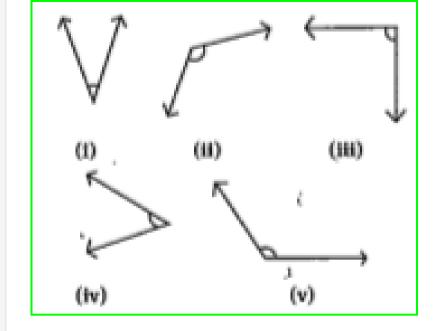






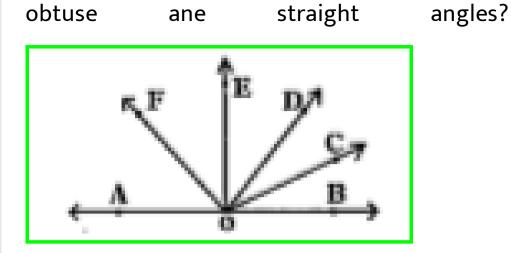








16. Name all the possible angles you can find in the following figure. Which are acute, right,



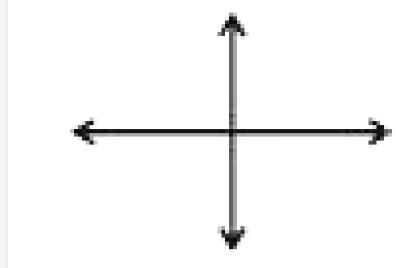




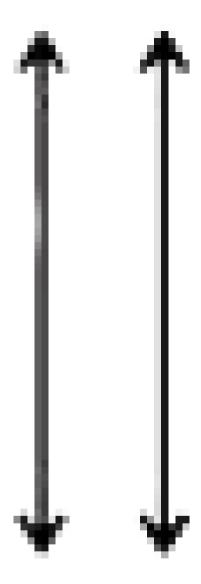




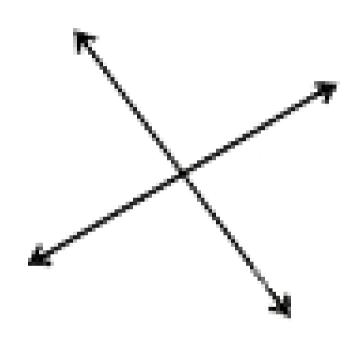






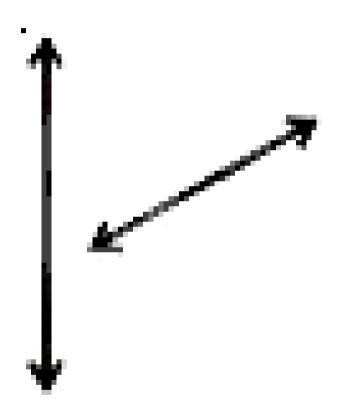






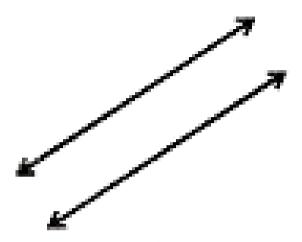


22. Which of the pairs of lines are parallel? Why?



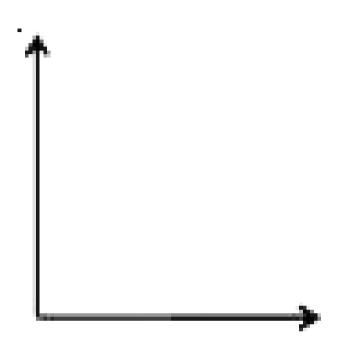


23. Is given pair of lines are parallel? Why?





24. IS given pair of lines are parallel? Why?

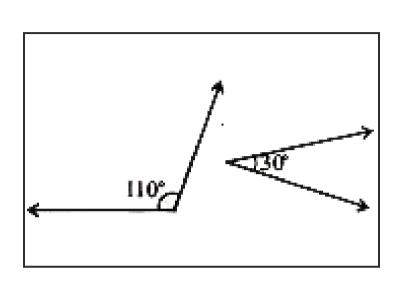




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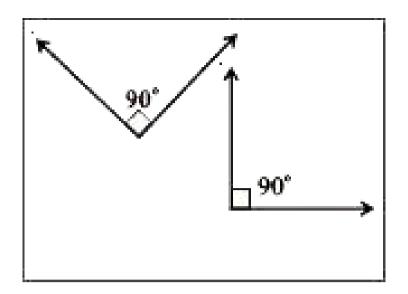
Exercise 2

1. Which of the pairs of angles are complementary?





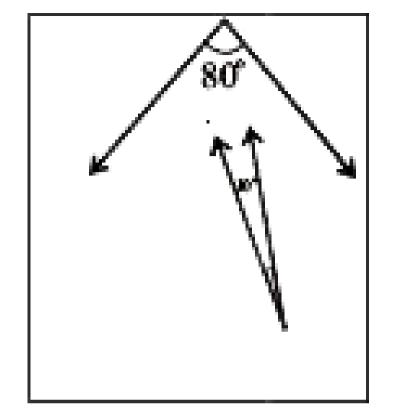
2. Which of the pairs of angles are complementary?





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3. Are given pairs of angles are complementary?





4. Find the complementary angle : 25°



5. Find the complementary angle : 40°



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6. Find the complementary angle : 89°



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7. Find the complementary angle : 55°



8. Two angles are complement to each other and are also equal. Find them.

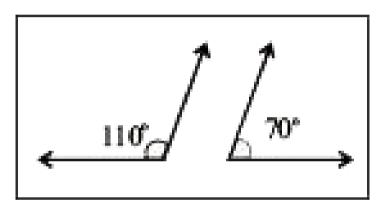


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9. Manasa says, "Each angle in any pair of complementary angles is always acute". Do you agree?

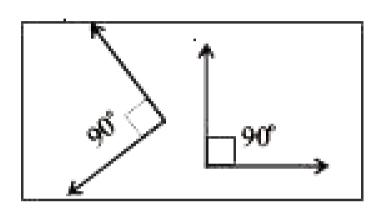


1. Which of the pairs of angles are supplementary?



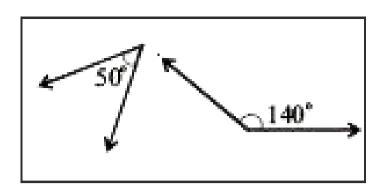


2. Which of the pairs of angles are supplementary?





3. Which of the pairs of angles are supplementary?



0

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4. Find the supplementary angles of the given angles 95°



5. Find the supplementary angles of the given angles $95\,^\circ$



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6. Find the supplementary angles of the given angles 150°



7. Find the supplementary angles of the given angles 20°



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8. Two acute angles cannot form a pair of supplementary angles. Justify.



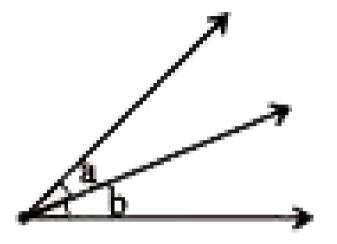
9. If two angles are equal and supplement to each other, then they are ___.



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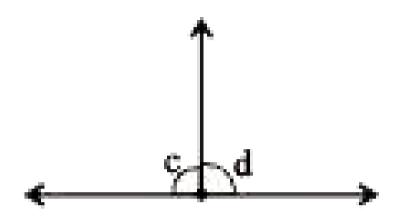
Exercise 4

1. Which of the are adjacent angles?



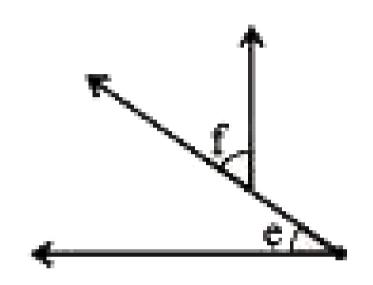


2. Which of the are adjacent angles?





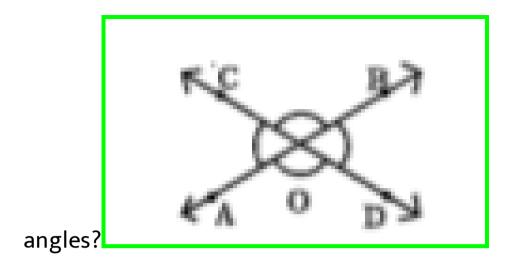
3. Which of the are adjacent angles?





4. Name all pairs of Adjacent angles. In the figure. How many pairs of adjacent angles are

formed? Why these angles are called adjacent





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5. Can two adjacent angles be supplementary? Draw figure.



6. Can two adjacent angles be complementary ? Draw figure.



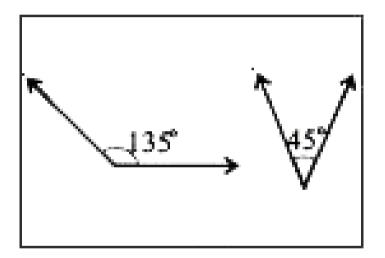
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7. Give four examples of adjacent angles in daily life. Example: Angles between the spokes at the centre of a cycle wheel. (i) ___ (ii) ___ (iii) ___ (iv)____



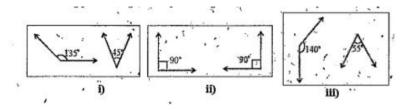
1. Draw the pairs of angles as adjacent angles.

Check whether they form linear pair.





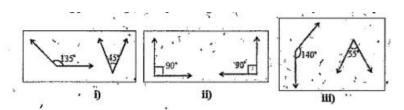
2. Draw the following pairs of angles as adjacent angles. Check whether they form linear pair.





3. Draw the following pairs of angles as adjacent angles. Check whether they form

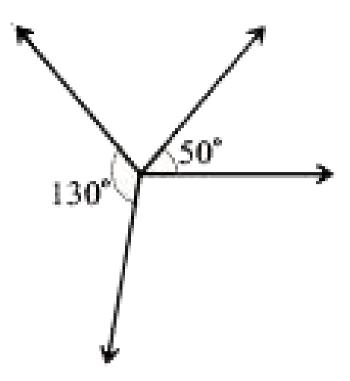
linear pair.





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4. Niharika took two angles- 130° and 50° and tried to check whether they form a linear pair. She made the following picture.

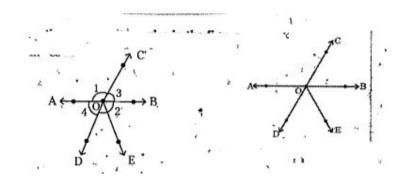


Can we say that these two angles do not form a linear pair? If not, what is Niharika's mistake?



1. Name two pairs of vertically opposite angles

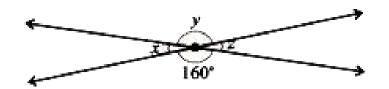
in the figure.





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2. Find the measure of x, y and z without actually measuring them.





3. Give some examples of vertically opposite angles in your surroundings.



Exercise 7 Fill Up The Blanks

1. Fill in the blanks: The lines which intersects two or more lines at distinct points is called



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2. Fill up the blanks : If the pair of alternate Interior angles are equal, then the lines are

----·



3. Fill up the blanks : The sum of Interior angles on the same side of the transversal are supplementary, then the lines are ____.



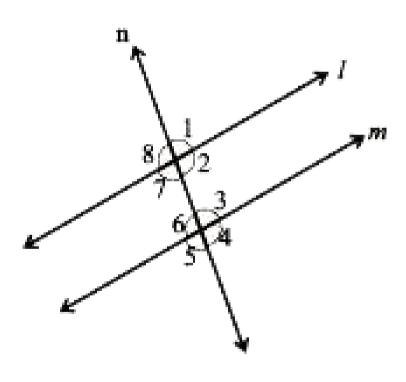
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4. If two lines intersect at a point, then the vertically opposite angles are always......



1. In the adjacent figure, the lines 'l' and 'm' are parallel and 'n' is a transversal.

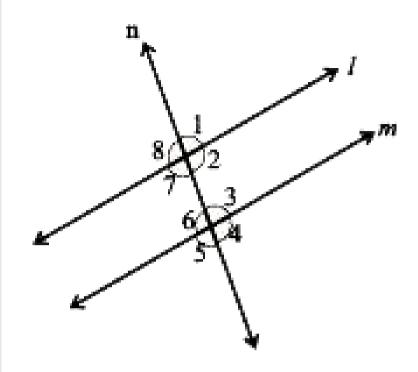
Fill in the blanks for all the situations given below



If $\angle 1 = 80^\circ$ then $\angle 2$ = _____

2. In the adjacent figure, the lines 'l' and 'm' are parallel and 'n' is a transversal.

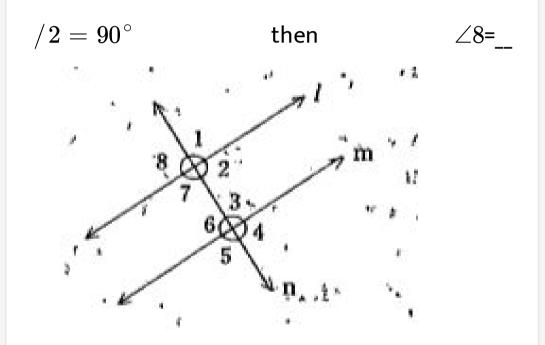
Fill in the blanks for all the situations given below



If
$$\angle 3=45^\circ$$
 then $\angle 7$ = _____



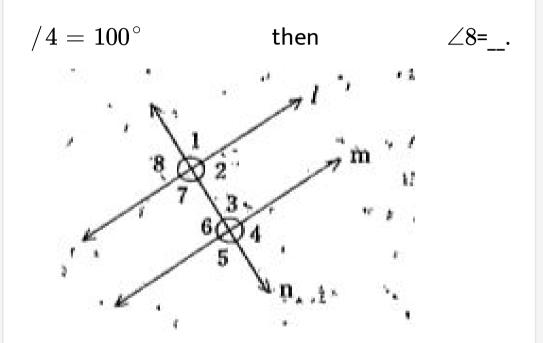
3. In the adjacent figure, the lines and 'm' are parallel and 'n' is a transversal. Fill in the blanks for all the altuations given below: If





parallel and 'n' is a transversal. Fill in the blanks for all the altuations given below: If

4. In the adjacent figure, the lines and 'm' are

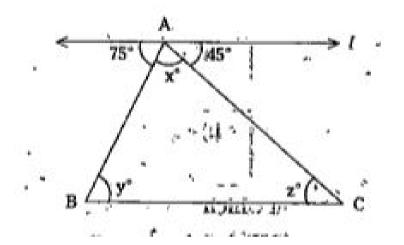




5. Find the measures of x, y and z in the figure,

where

BC.

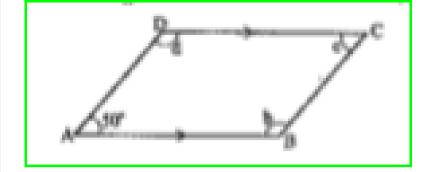




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6. ABCD is quadrilateral in which

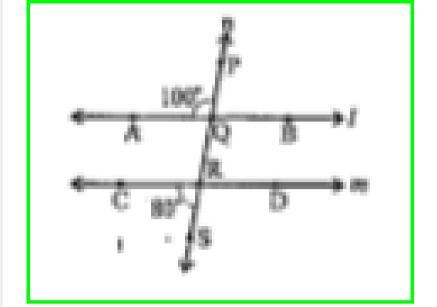
AB||DC and AD||BC. Find $\angle b, \angle c, \angle d.$





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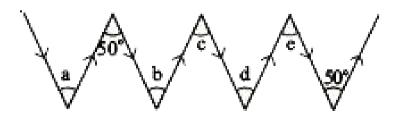
7. In a given figure, 'l' and 'm' are intersected by transversal 'n'. Is I parallel to m?





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8. Find $\angle a, \angle b, \angle c, \angle d$ and $\angle e$ in the figure ?









1. Draw Or write five pairs of complementary angles of your choice.



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2. Write any five pairs of supplementary angles of your choice.



3. How many transversals can be drawn for two distinct lines?



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Do This

1. Draw an angle $\angle AOB=40^\circ$. With the same vertex 'O' draw $\angle BOC=50^\circ$, taking \overline{OB} is initial ray as shown in the figure. Since

the sum of these angles is 90° they together form a right angle. Take another pair 60° and 50° and join in the same way. Do they form complementary angles? Why? Why not?



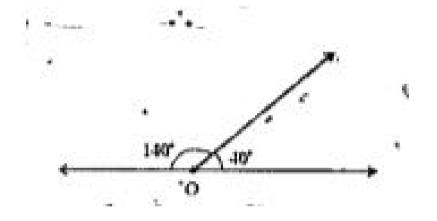
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2. Draw an angle $\angle AOB = 100^{\circ}$. With the same vertex O, draw $\angle BOC = 80^{\circ}$ such that OB is common to two anglen.



3. Two adjacent angles are 40 and 140. Do they form a linear pair? Draw a picture and check.

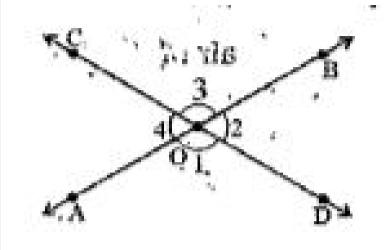
Reau drew the picture like this.she has drawn correctly? Do these adjacent angles form a linear pair?





4. Draw two lines \overline{AB} and \overline{CD} such that they intersect at point 'O' .Trace the figure given below on a tracing papier. Place the traced figure over the figure given below and rotate it such that $\angle DOB$ coincides $\angle COA$,Observe the angles $\angle AOD$ and $\angle BOC$ also $\angle COA$ and $\angle DOB$.You will notice that

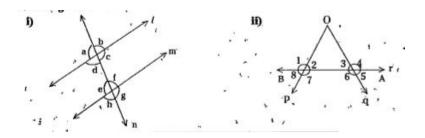
$$\angle AOD = \angle BOC$$
 and $\angle CDA = \angle DOB$





5. Identify the transversal in figure (i) and (ii).

Identify the exterior and interior angles and





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6. Consider the following lines. Which line is a transversal?

