

MATHS

BOOKS - PSEB

Line and Angles

Example

1. Can two acute angles be complement to each other?



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2. Can two obtuse angles be complement to each other?



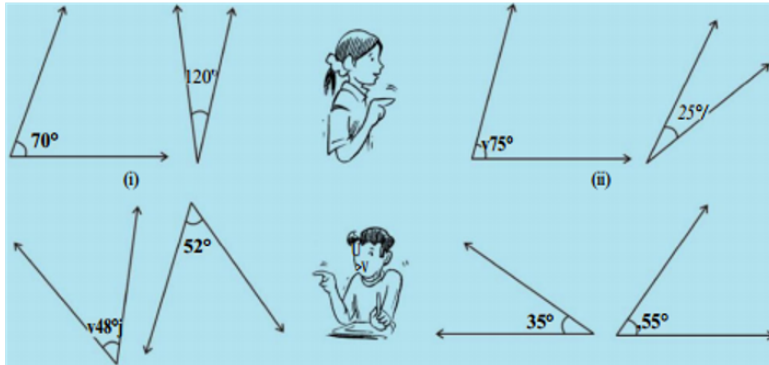
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3. Can two right angles be complement to each other?



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4. Which pairs of following angles are complementary?



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5. What is the measure of the complement of each of the following angles?

45°



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6. What is the measure of the complement of each of the following angles?

65°



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7. What is the measure of the complement of each of the following angles?

41°





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8. What is the measure of the complement of each of the following angles?

54°



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9. The difference in the measures of two complementary angles is 12° . Find the measures of the angles.



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10. Can two obtuse angles be supplementary?



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11. Can two acute angles be supplementary?



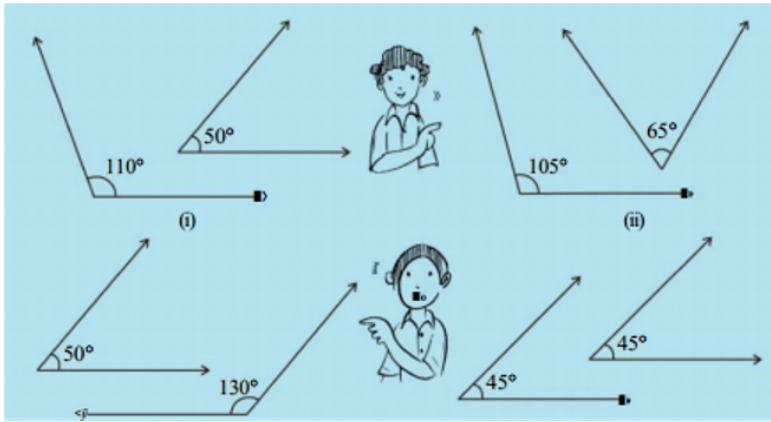
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12. Can two right angles be supplementary?



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13. Find the pairs of supplementary angles



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14. What will be the measure of the supplement of each one of the following

angles?

100°



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15. What will be the measure of the supplement of each one of the following angles?

90°



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16. What will be the measure of the supplement of each one of the following angles?

55°



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17. What will be the measure of the supplement of each one of the following angles?

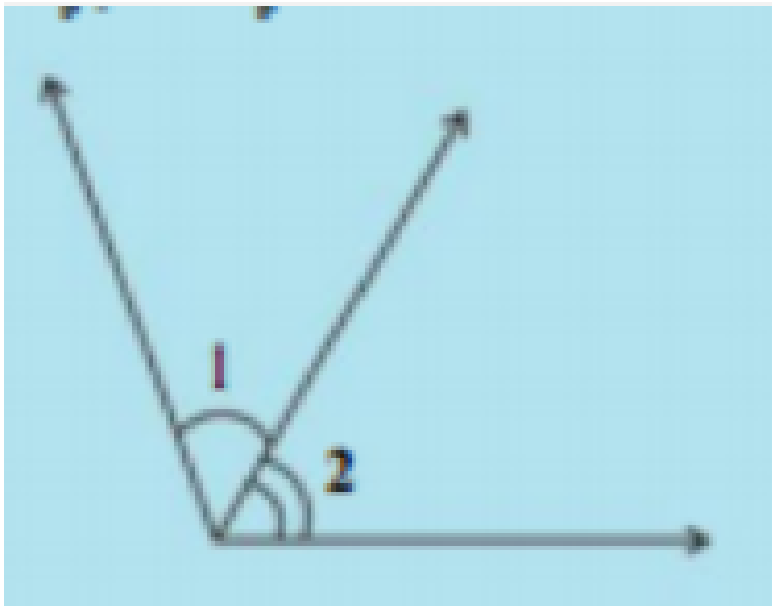
125°





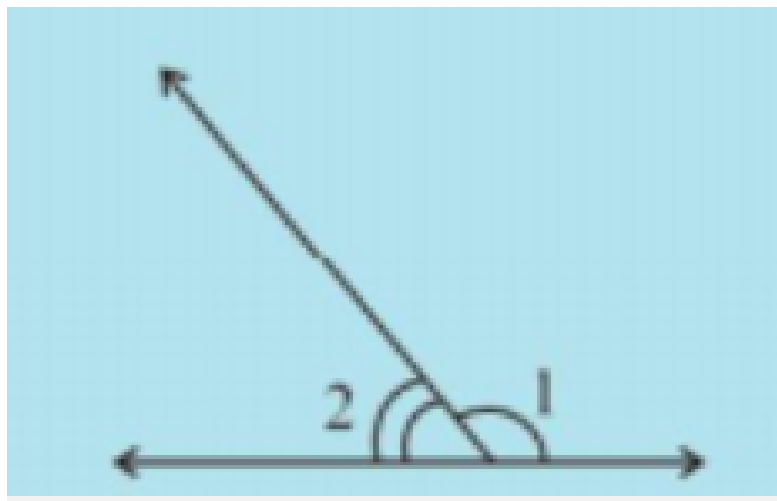
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18. Are the angles marked 1 and 2 adjacent? If they are not adjacent, say, 'why'.



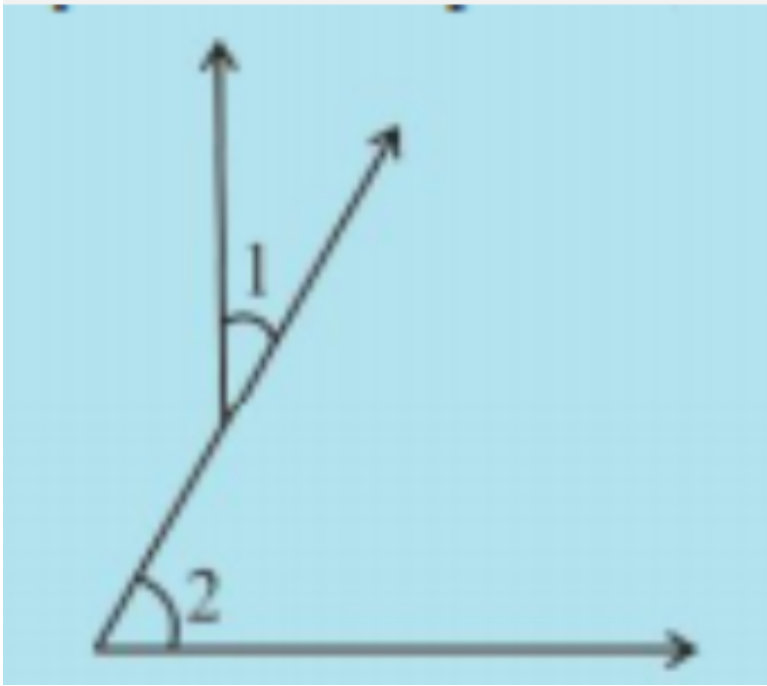
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19. Are the angles marked 1 and 2 adjacent? If they are not adjacent, say, 'why'.



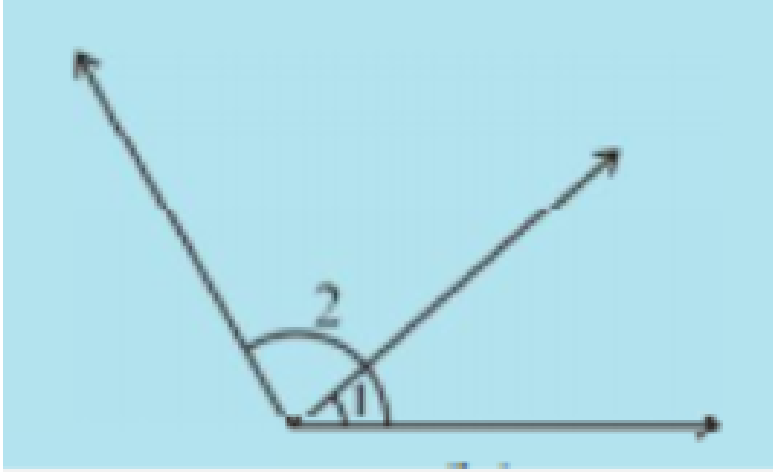
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20. Are the angles marked 1 and 2 adjacent? If they are not adjacent, say, 'why'.



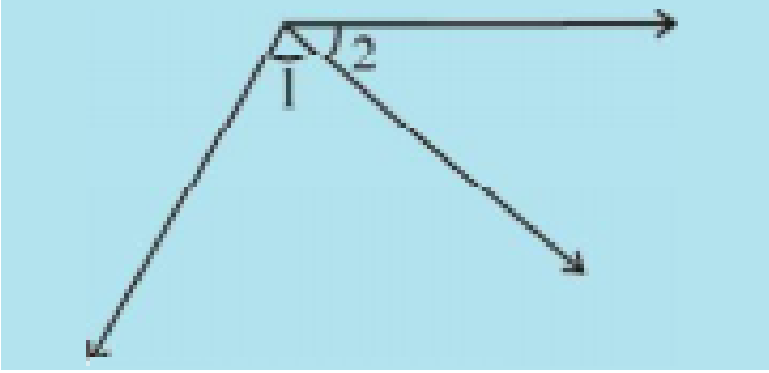
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21. Are the angles marked 1 and 2 adjacent? If they are not adjacent, say, 'why'.



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22. Are the angles marked 1 and 2 adjacent? If they are not adjacent, say, 'why'.

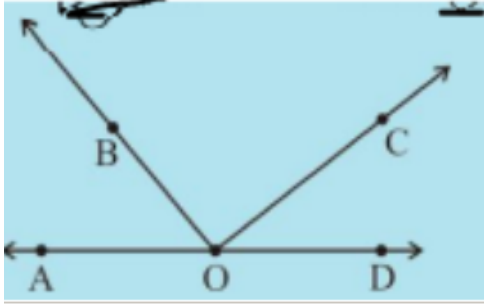


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23. In the given are the following adjacent angles?

$\angle AOB$ and $\angle BOC$

Justify your answer.

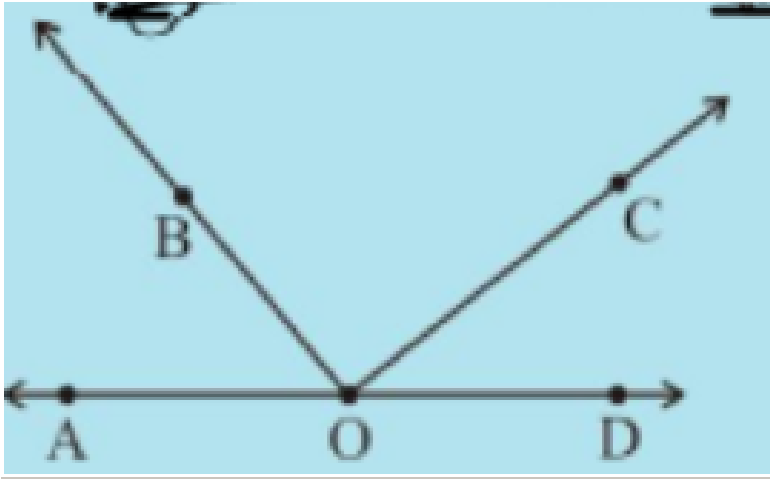


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24. In the given are the following adjacent angles?

$\angle BOD$ and $\angle BOC$

Justify your answer.



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25. Can two adjacent angles be supplementary?

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26. Can two adjacent angles be complementary?



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27. Can two obtuse angles be adjacent angles?



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28. Can an acute angle be adjacent to an obtuse angle?



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29. Can two acute angles form a linear pair?



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30. Can two obtuse angles form a linear pair?



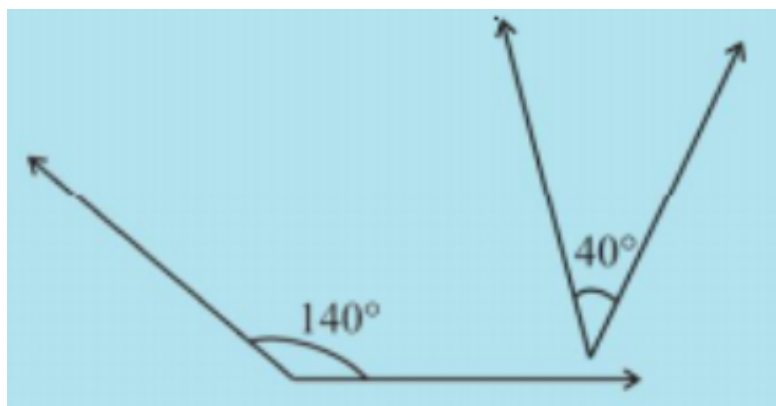
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31. Can two right angles form a linear pair?



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32. Check which of the following pairs of angles form a linear pair.



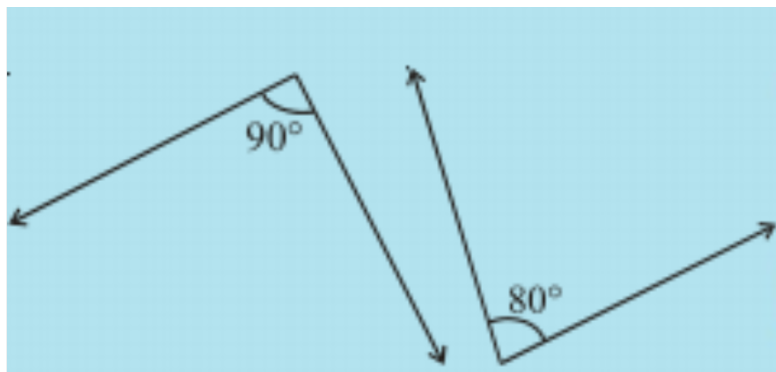
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33. Check which of the following pairs of angles form a linear pair.



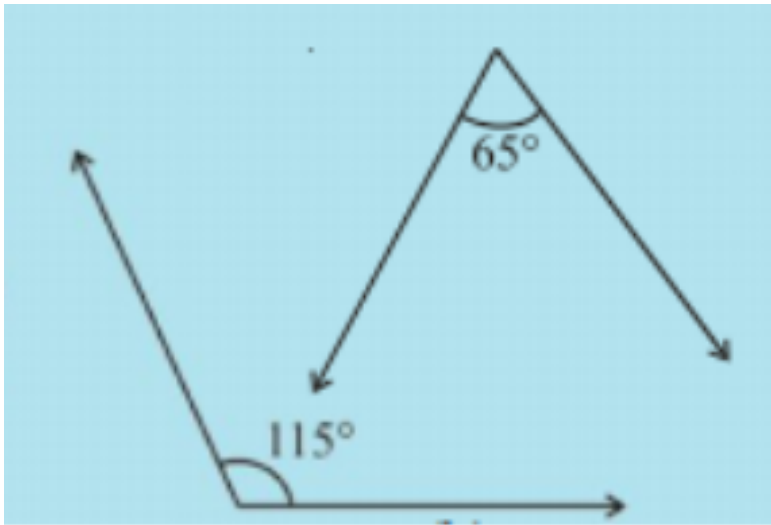
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34. Check which of the following pairs of angles form a linear pair.



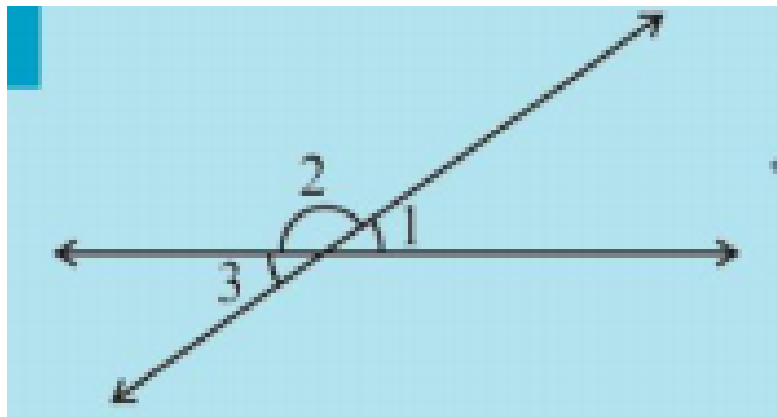
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35. Check which of the following pairs of angles form a linear pair.



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36. In the given figure, if $\angle 1 = 30^\circ$, find $\angle 2$ and $\angle 3$



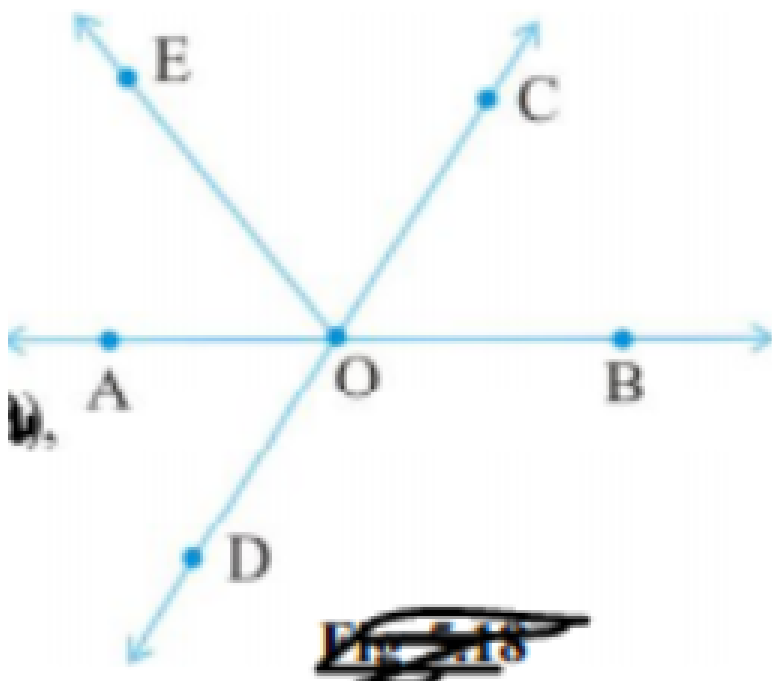
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37. Give an example for vertically opposite angles in your surroundings.

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38. In identity:

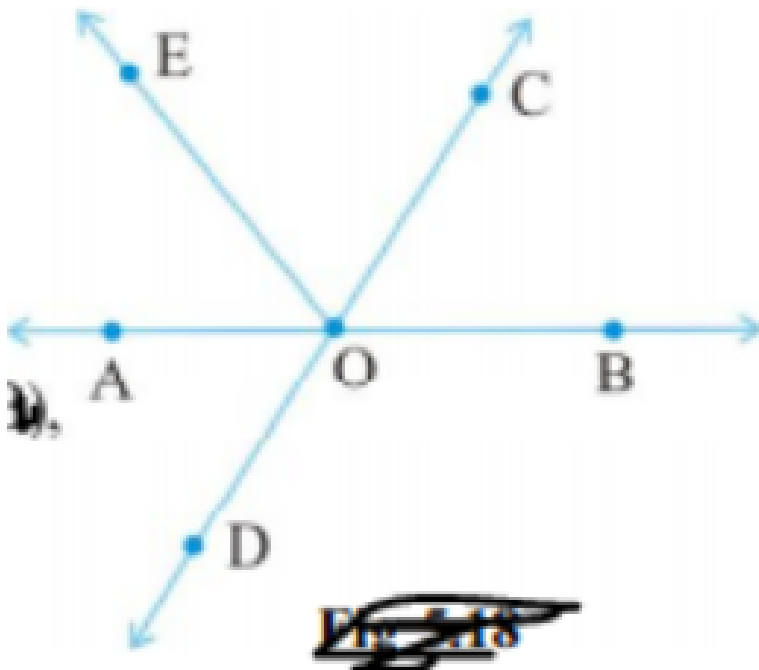
Five pairs of adjacent angles.



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39. In identity:

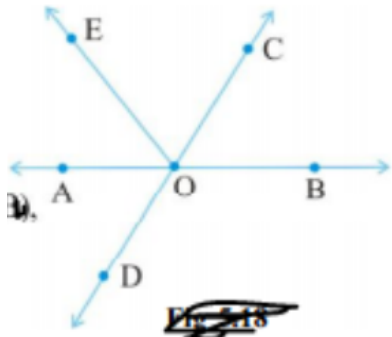
Three linear pairs.



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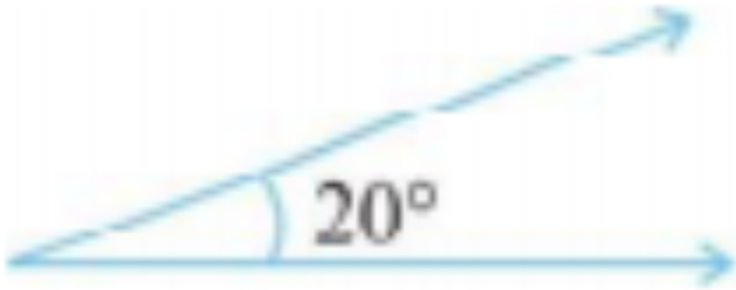
40. In identity:

Two pairs of vertically opposite angles.



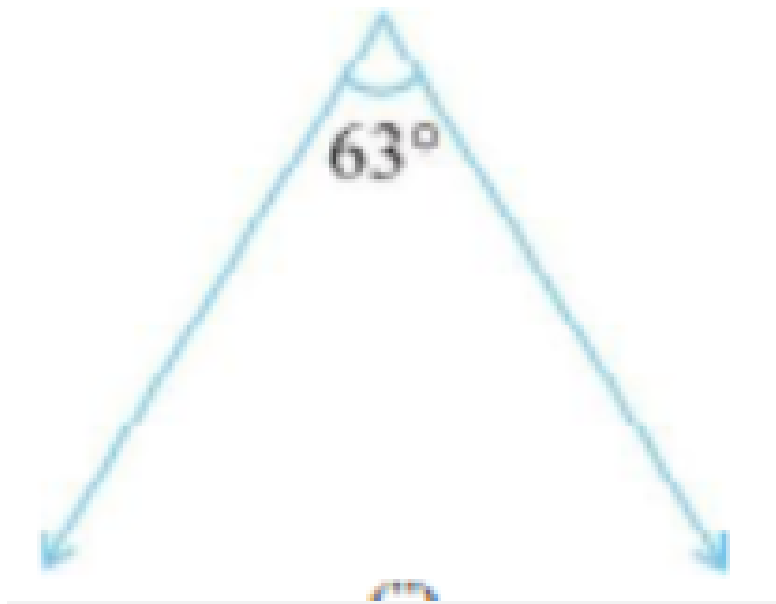
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41. Find the complement of each of the following angles:



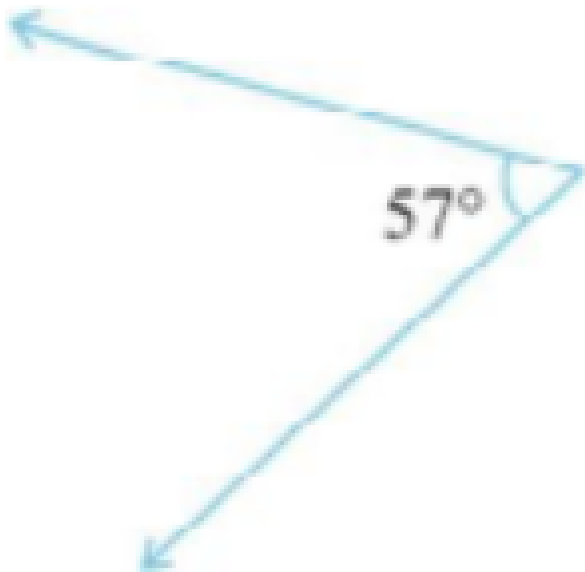
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42. Find the complement of each of the following angles:



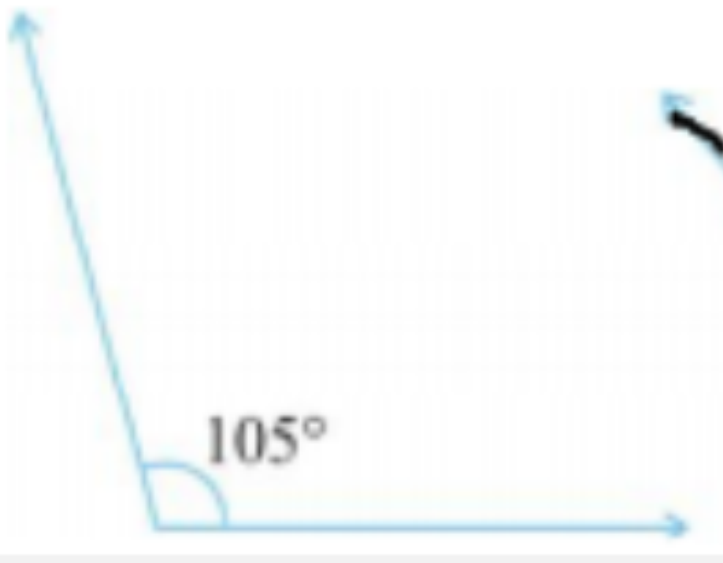
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43. Find the complement of each of the following angles:



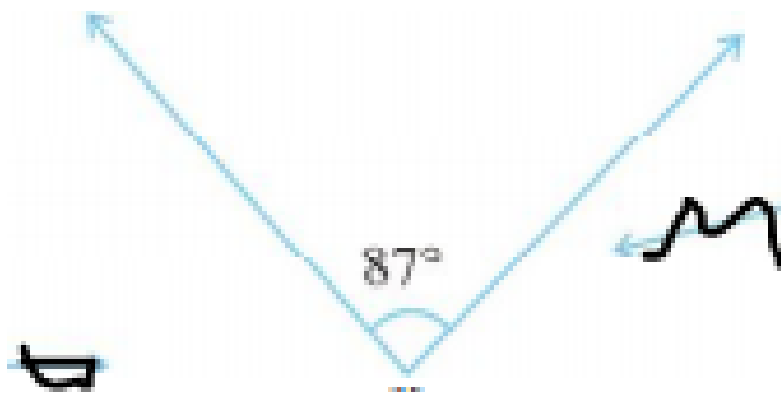
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44. Find the supplement of each of the following angles:



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



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



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

65° , 115°



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

63° , 27°





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

112° , 68°



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50. Identify which of the following pairs of angles are complementary and which are

supplementary.

130° , 50°



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

45° , 45°



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

80° , 10°



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53. Find the angle which is equal to its complement.



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54. Find the angle which is equal to its supplement.



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55. 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.



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56. Can two angles be supplementary if both of them are:
acute?



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57. Can two angles be supplementary if both of them are:
obtuse?



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58. Can two angles be supplementary if both of them are:
right?



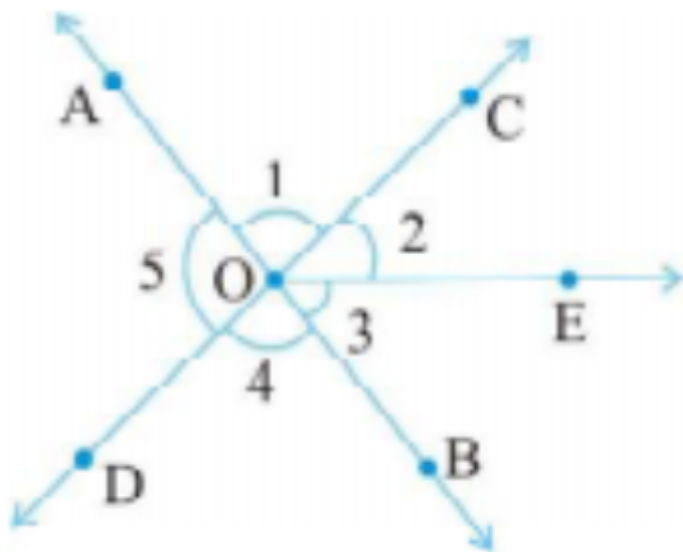
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59. An angle is greater than 45° . Is its complementary angle greater than 45° or equal to 45° or less than 45° ?



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60. In the adjoining figure:

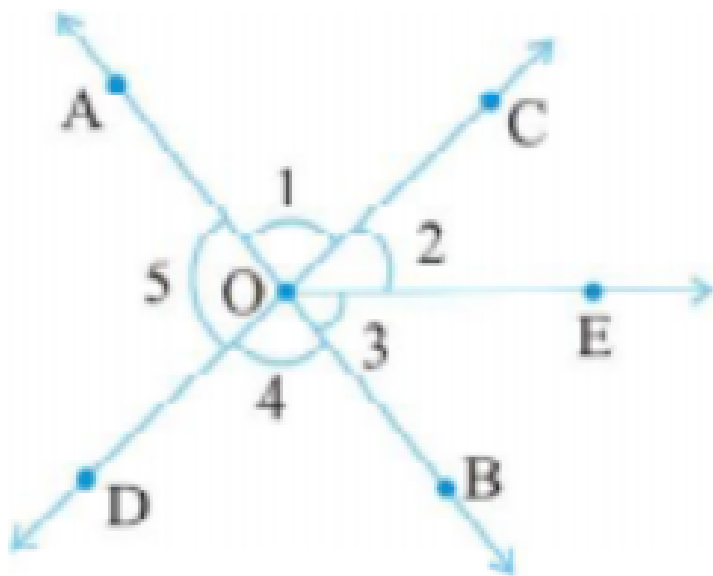


Is $\angle 1$ adjacent to $\angle 2$?



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61. In the adjoining figure:



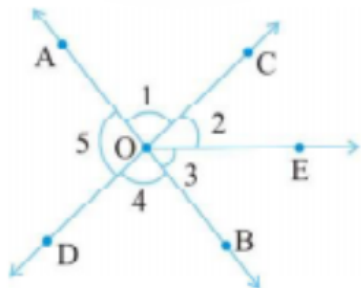
Is $\angle AOC$ adjacent to $\angle AOE$?



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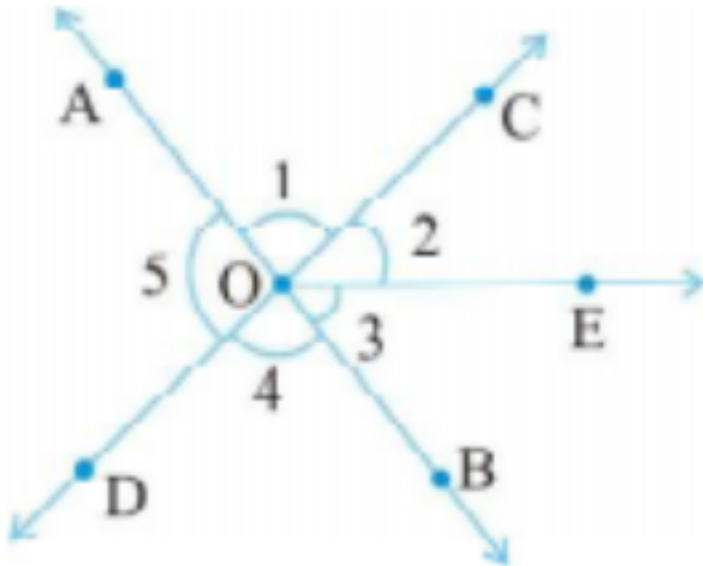
62. In the adjoining figure:

Do $\angle COE$ and $\angle EOD$ form a linear pair?



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63. In the adjoining figure:

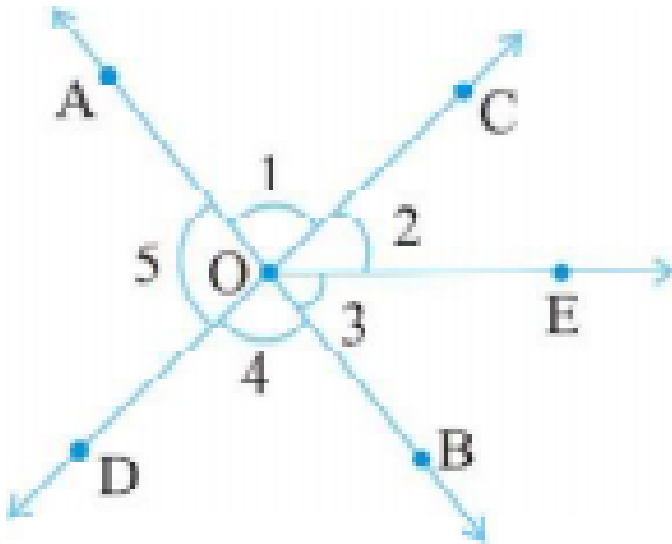


Are $\angle BOD$ and $\angle DOA$ supplementary?



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64. In the adjoining figure:

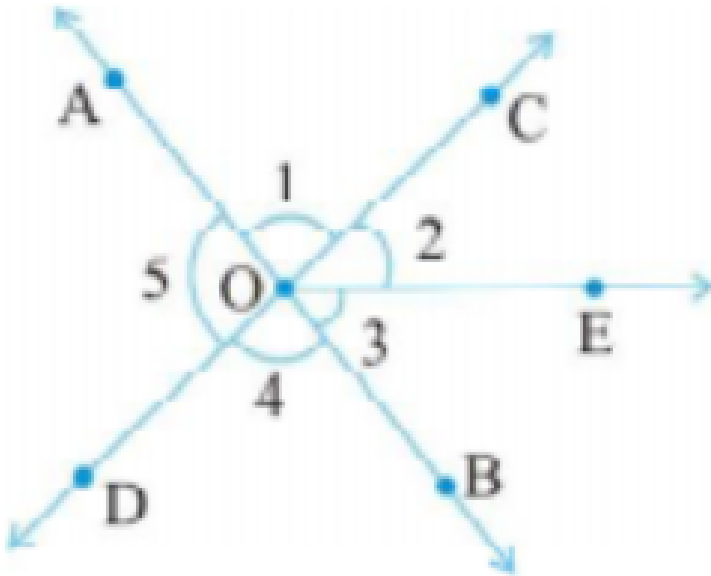


Is $\angle 1$ vertically opposite to $\angle 4$?



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65. In the adjoining figure:



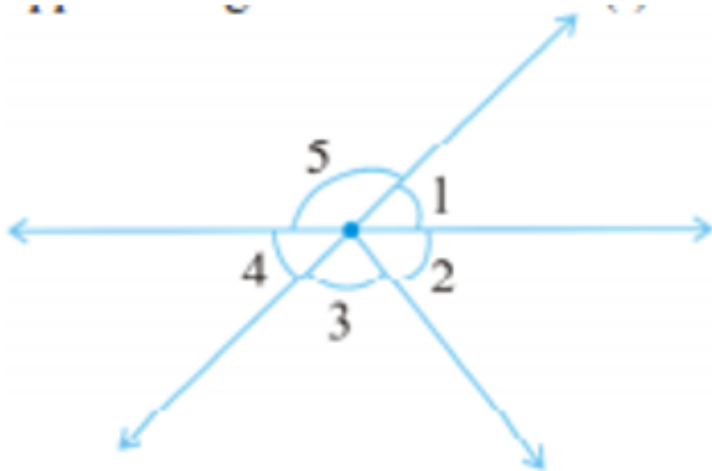
What is the vertically opposite angle of $\angle 5$?



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66. Indicate which pairs of angles are:

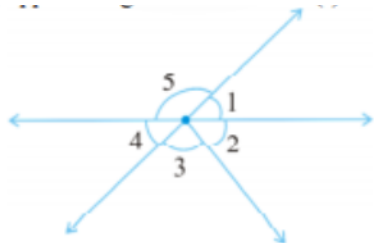
Vertically opposite angles.



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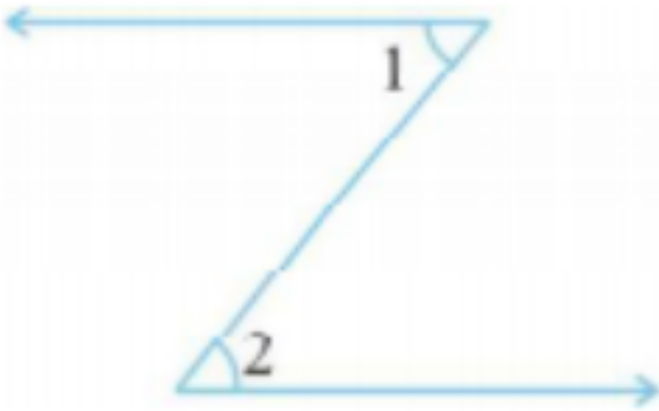
67. Indicate which pairs of angles are:

Linear pairs.



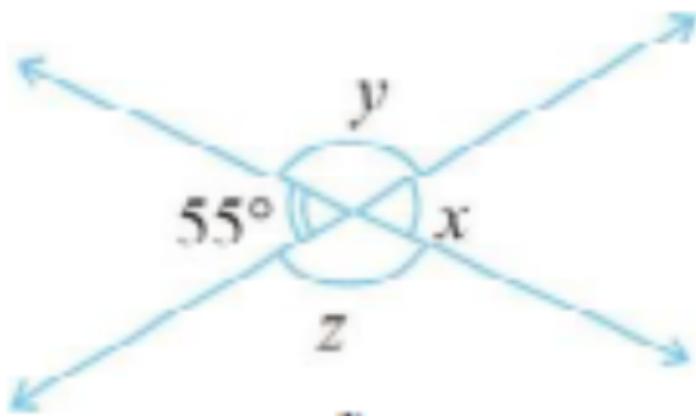
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68. In the following figure, is $\angle 1$ adjacent to $\angle 2$? Give reasons.



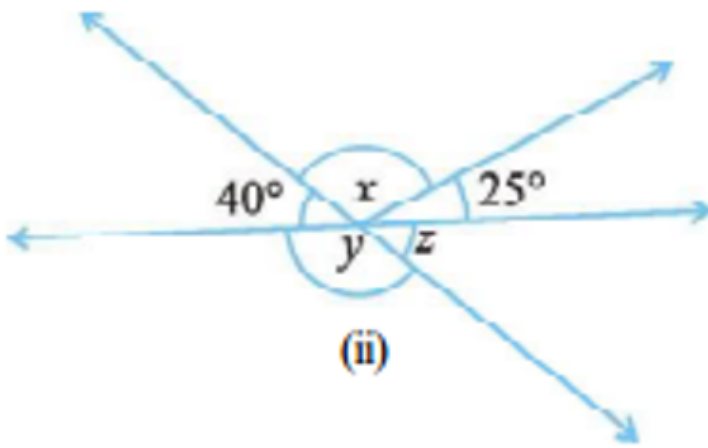
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69. Find the values of the angles x , y , and z in each of the following:



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70. Find the values of the angles x , y , and z in each of the following:



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71. Fill in the blanks:

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



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72. Fill in the blanks:

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



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73. Fill in the blanks:

Two angles forming a linear pair are _____.



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74. Fill in the blanks:

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



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75. Fill in the blanks:

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



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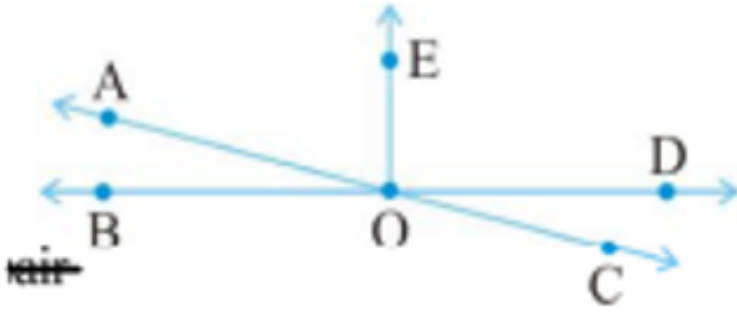
76. Fill in the blanks:

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 _____.



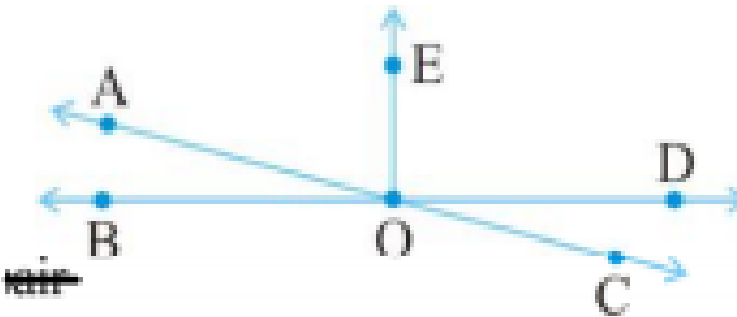
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77. In the adjoining figure, name the following pairs of angles.



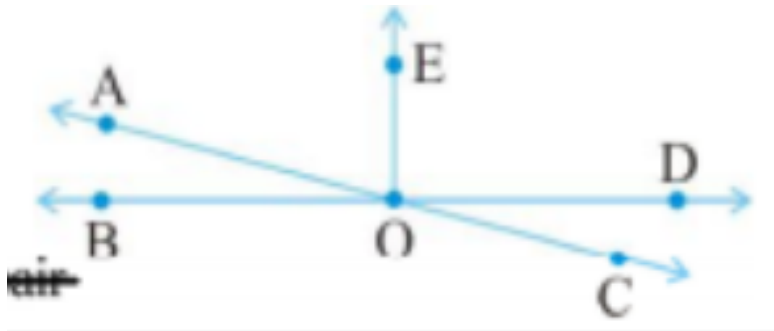
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78. In the adjoining figure, name the following pairs of angles.



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79. In the adjoining figure, name the following pairs of angles.

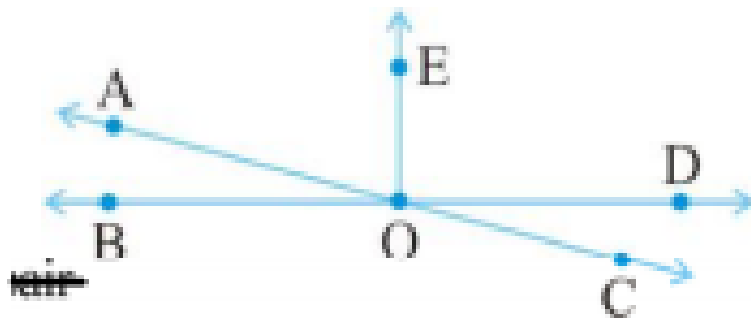


obtuse vertically opposite angles



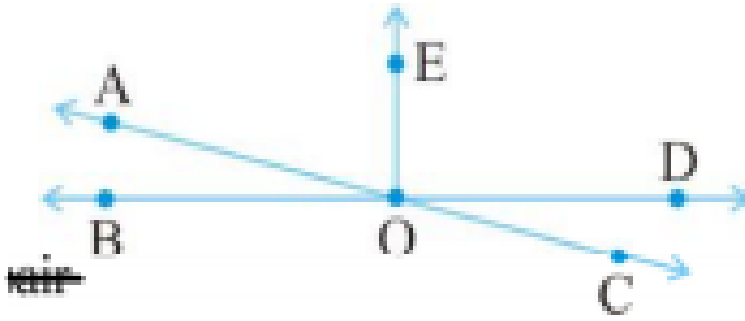
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80. In the adjoining figure, name the following pairs of angles.



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81. In the adjoining figure, name the following pairs of angles.



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82. Find examples from your surroundings where lines intersect at right angles.



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83. Find the measures of the angles made by the intersecting lines at the vertices of an equilateral triangle.



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84. Draw any rectangle and find the measures of angles at the four vertices made by the intersecting lines.



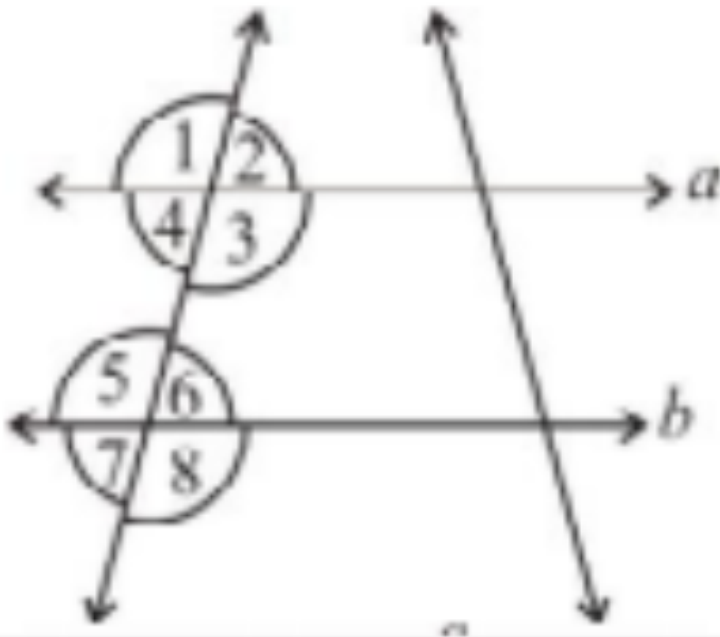
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85. If two lines intersect, do they always intersect at right angles?



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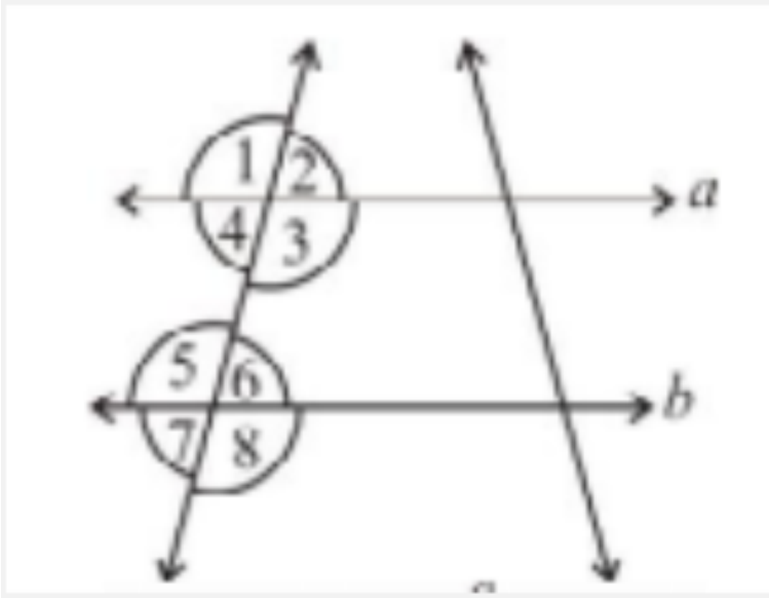
86. State the property that is used in each of the following statements?



If $a \parallel b$, then $\angle 1 = \angle 5$.

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87. State the property that is used in each of the following statements?

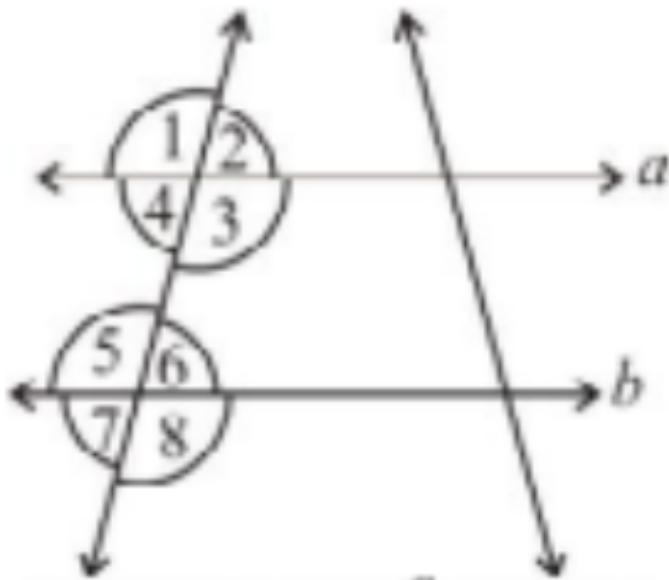


If $\angle 4 = \angle 6$, then $a \parallel b$.



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88. State the property that is used in each of the following statements?

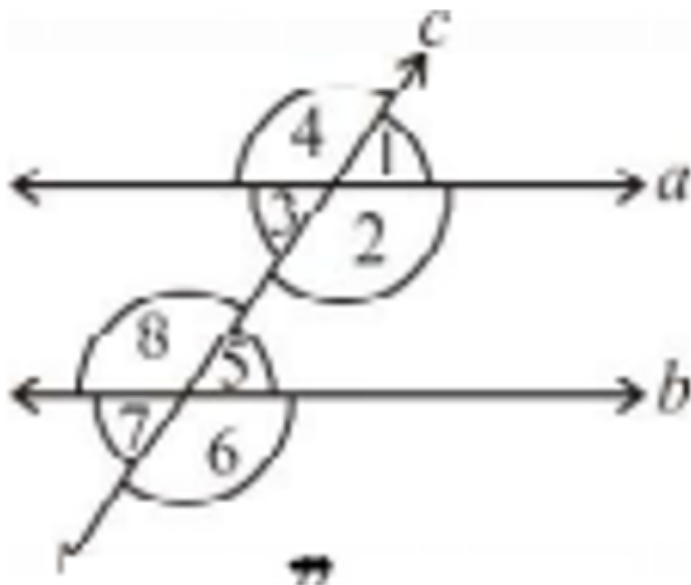


If $\angle 4 + \angle 5 = 180^\circ$, then $a \parallel b$.



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89. In the adjoining figure, identify

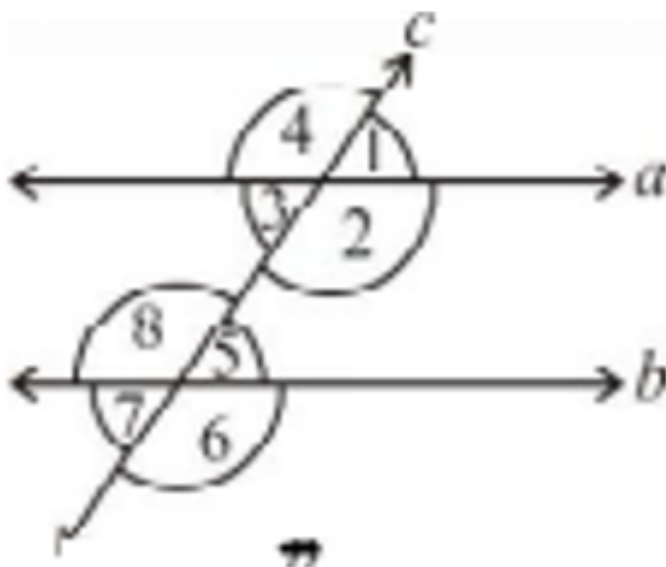


the pairs of corresponding angles.



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90. In the adjoining figure, identify

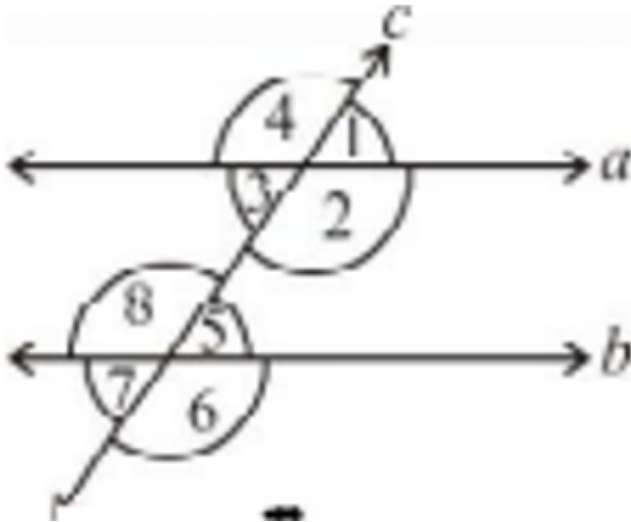


the pairs of alternate interior angles.



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91. In the adjoining figure, identify

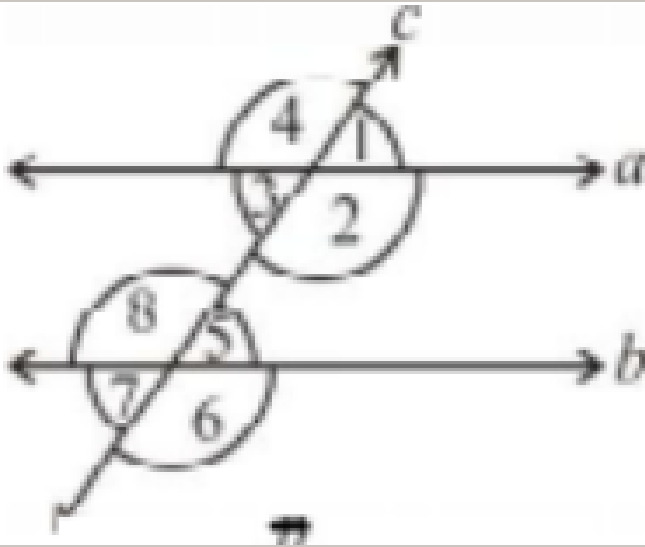


the pairs of interior angles on the same side of the transversal.



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92. In the adjoining figure, identify

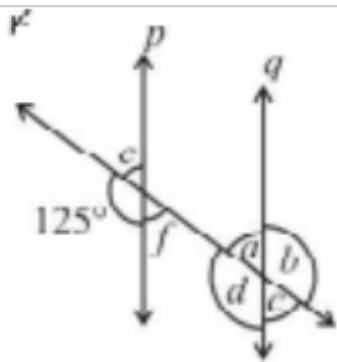


the vertically opposite angles.



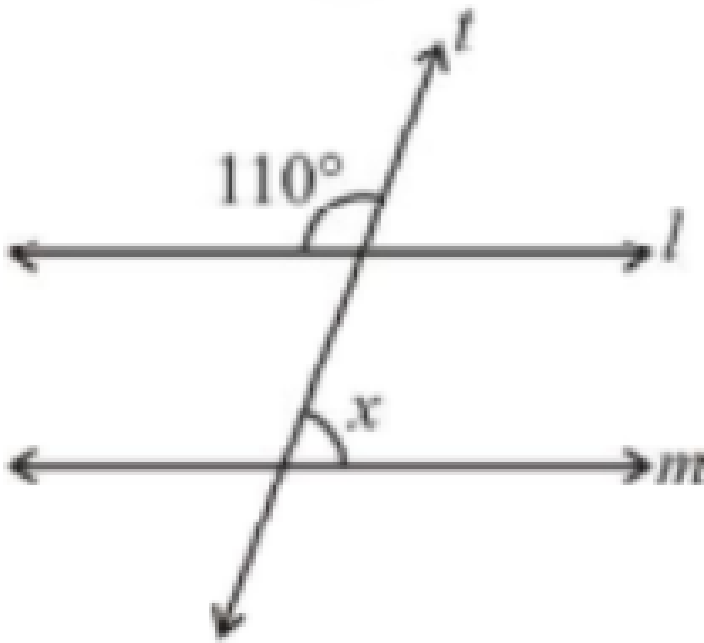
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93. In the adjoining figure, $p \parallel q$. Find the unknown angles.



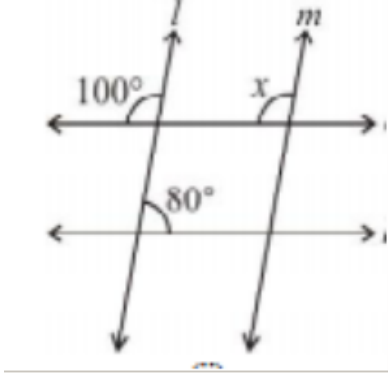
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94. Find the value of x in each of the following figures if $l \parallel m$.



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

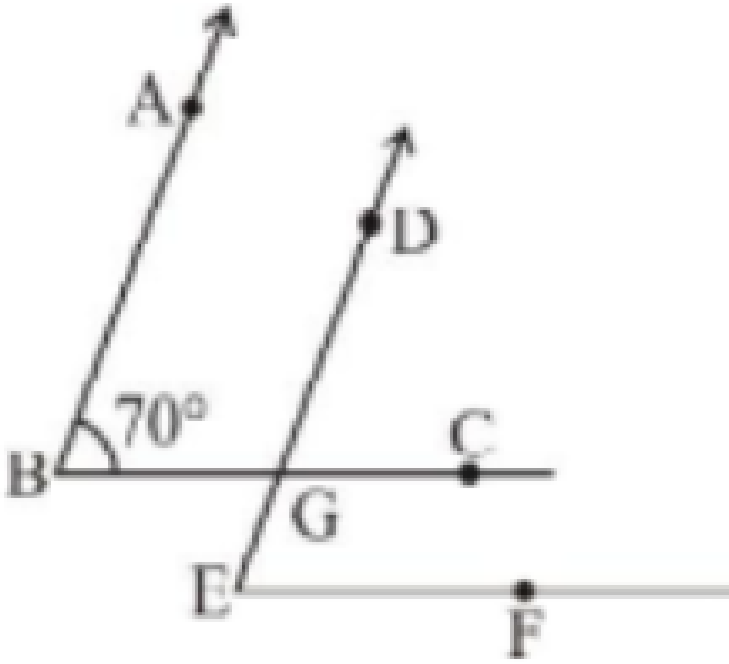


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96. In the given figure, the arms of two angles are parallel.

If $\angle ABC = 70^\circ$, then find

$\angle DGC$

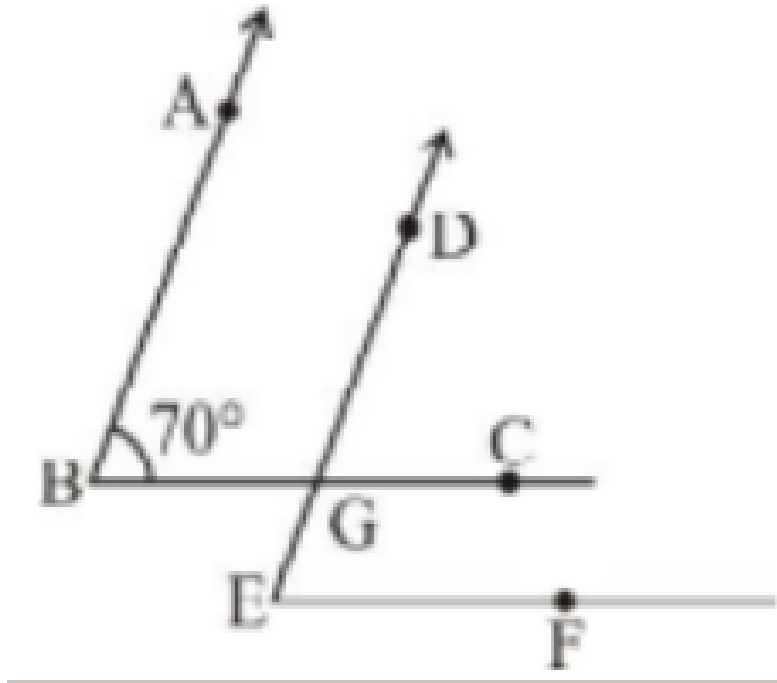


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97. In the given figure, the arms of two angles are parallel.

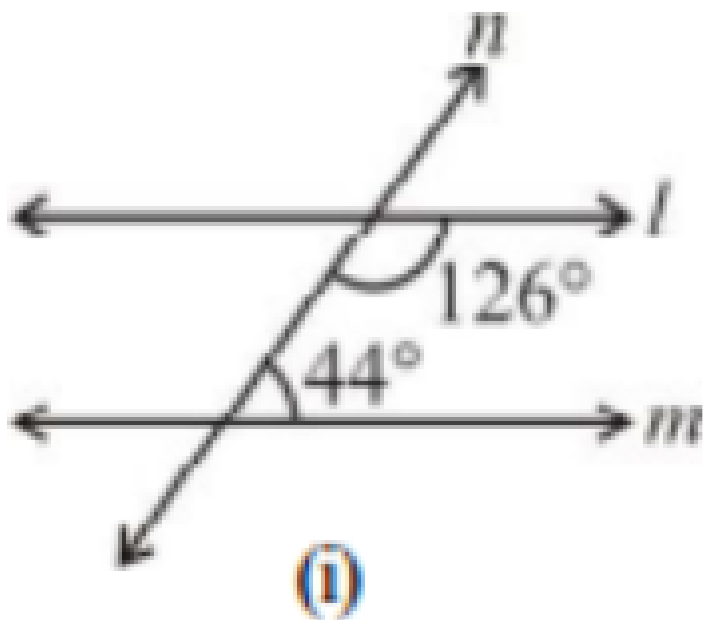
If $\angle ABC = 70^\circ$, then find

$\angle DEF$



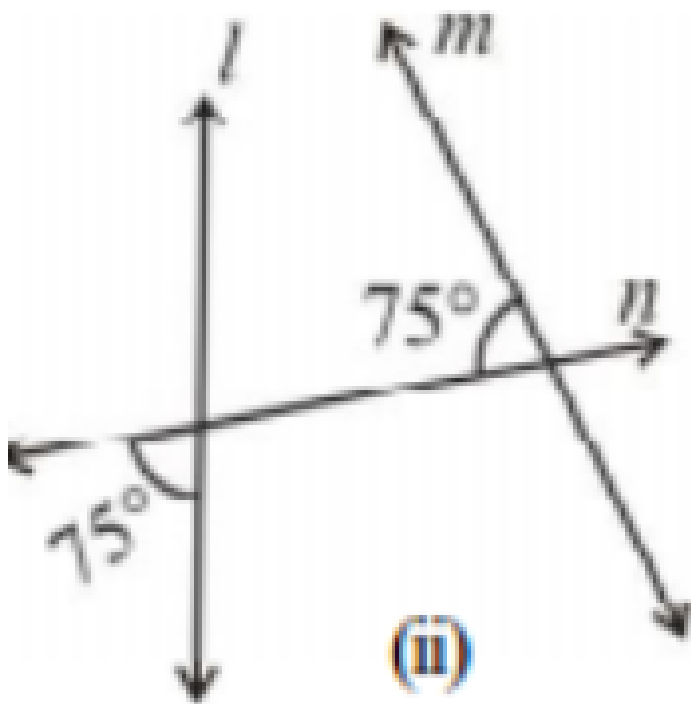
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98. In the given figures below, decide whether l is parallel to m .



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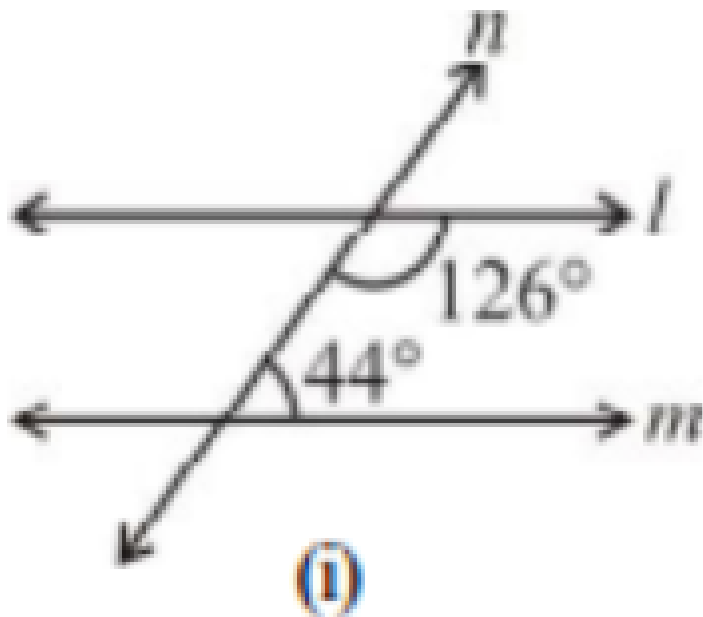
99. In the given figures below, decide whether l is parallel to m .



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100. In the given figures below, decide whether

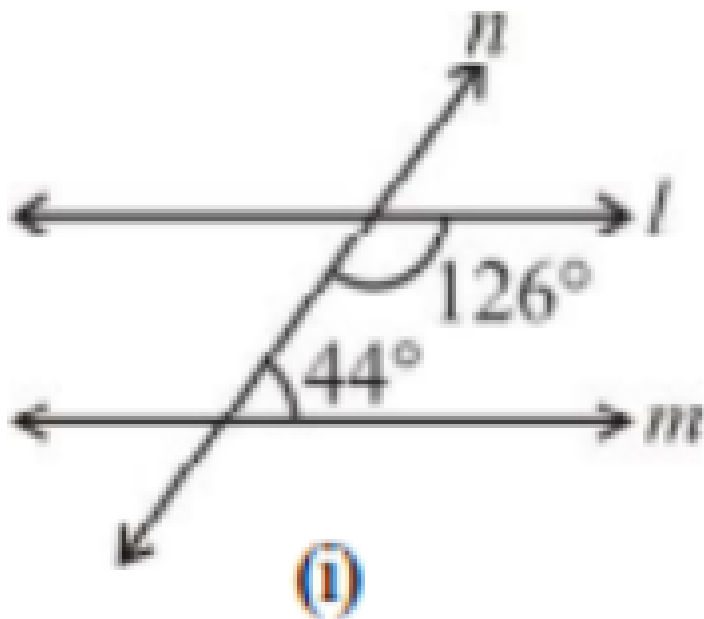
l is parallel to m .



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101. In the given figures below, decide whether

l is parallel to m .



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