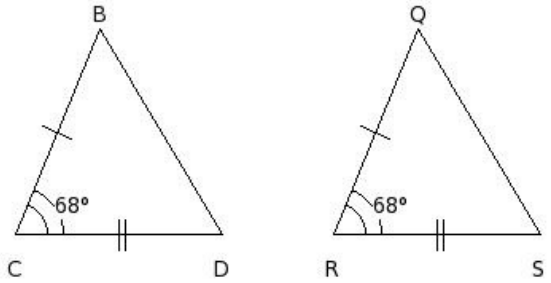
EduSahara™ Assignment

Name : Congruence of Triangles

Chapter : Triangles

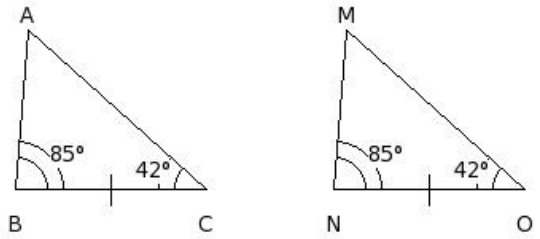
Grade : ICSE Grade IX

1. Identify the property by which the two given triangles are congruent



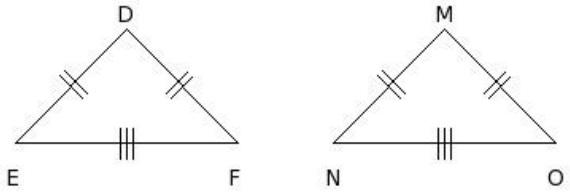
(i) ASA Congruency (ii) SAS Congruency (iii) SSS Congruency (iv) RHS Congruency

2. Identify the property by which the two given triangles are congruent



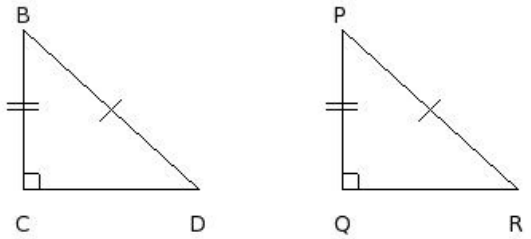
(i) ASA Congruency (ii) RHS Congruency (iii) SSS Congruency (iv) SAS Congruency

3. Identify the property by which the two given triangles are congruent



(i) RHS Congruency (ii) ASA Congruency (iii) SSS Congruency (iv) SAS Congruency

4. Identify the property by which the two given triangles are congruent



(i) RHS Congruency (ii) SSS Congruency (iii) ASA Congruency (iv) SAS Congruency

5. Which of the following are true?

a) Any two triangles are similar.
b) Any two circles are similar.
c) Any two circles are congruent.
d) Any two triangles are congruent.
e) Any two squares are similar.
f) Any two squares are congruent.

(i) {c,e} (ii) {a,b} (iii) {a,e,b} (iv) {b,e} (v) {d,f,b}

6. Which of the following are true?

a) A triangle is a polygonal region.
b) A circle is a polygonal region.
c) A square is a polygonal region.
d) A semi-circle is a polygonal region.
e) A sector is a polygonal region.

(i) {e,b,a} (ii) {a,c} (iii) {d,c} (iv) {d,c,a} (v) {b,a}

7. Which of the following are true?

a) Congruent figures have same area.
b) Similar and congruent are not synonymous.
c) If two figures are congruent, then they are similar too.
d) If two figures are similar, then they are congruent too.
e) Similar figures have same area.

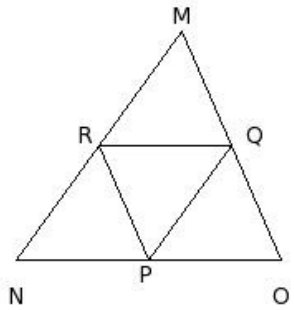
(i) {d,e,c} (ii) {a,b,c} (iii) {d,a} (iv) {d,a,b} (v) {e,b}

8. Which of the following are true?

a) A polygonal region can be divided into a finite number of triangles in a unique way.
b) Area of the union of two polygonal region is not equal to the sum of the individual area.
c) Area of a convex polygonal region is equal to the sum of the areas of all triangles formed by joining the vertices of the polygon with an interior point.
d) Area of the union of two polygonal region is the sum of the individual area.

(i) {b,c} (ii) {a,c,b} (iii) {d,c} (iv) {a,b} (v) {a,d,b}

9. In the given figure, the area of the $\triangle MNO$ is x sq.cm. P,Q,R are the mid-points of the sides NO , OM and MN respectively. The area of the $\triangle PQR$ is



(i) $\frac{3}{4}$ of area of $\triangle MNO$ (ii) $\frac{1}{2}$ of area of $\triangle MNO$ (iii) $\frac{1}{3}$ of area of $\triangle MNO$ (iv) $\frac{1}{4}$ of area of $\triangle MNO$

(v) $\frac{2}{3}$ of area of $\triangle MNO$

10. If the ratio of the bases of two triangles is A : B and the ratio of the corresponding heights is C : D , the ratio of their areas in the same order is

(i) AD : BC (ii) AB : CD (iii) AC : BD (iv) BC : AD (v) CD : AB

11. In the given figure, points L , M and N are the mid-points of sides JK, KI and IJ of △IJK. Which of the following are true?

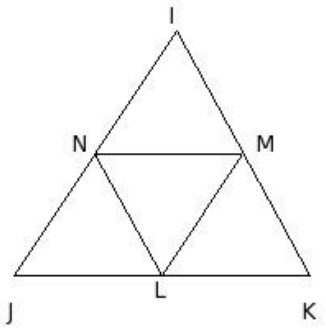
a) Area of △IJK = 4 times area of △LMN

b) Area of $\triangle IJK = \frac{1}{3}$ area of △LMN

c) All four small triangles have equal areas

d) Area of trapezium JKMN is thrice the area of △INM

e) Area of trapezium JKMN is $\frac{1}{4}$ the area of △IJK



(i) {a,c,d} (ii) {b,a,c} (iii) {b,a} (iv) {e,c} (v) {b,e,d}

12. In the given figure, points G , H and I are the mid-points of sides EF, FD and DE of △DEF. Which of the following are true?

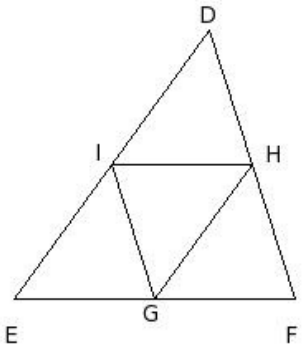
a) △IEG ≅ △GHI

b) △IEG ≅ △DIH

c) △DIH ≅ △HGF

d) △DIH ≅ △GIH

e) △DIH ≅ △GHI



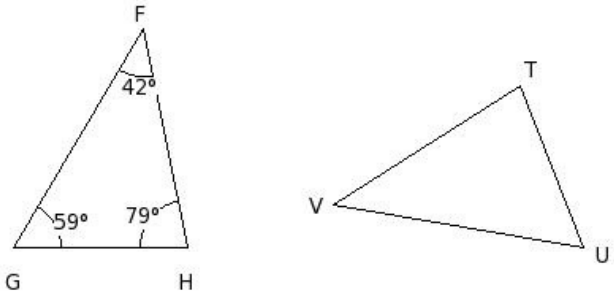
(i) {d,c} (ii) {d,a} (iii) {d,e,a} (iv) {a,b,c,e} (v) {d,b}

13. In the given figure, which of the following is true?

(i) △CDB ≅ △UVW (ii) △BCD ≅ △VWU (iii) △BCD ≅ △WVU (iv) △BCD ≅ △UVW (v) △BCD ≅ △WUV

14. In the given figure, △FGH ≅ △VUT. Which of the following are true?

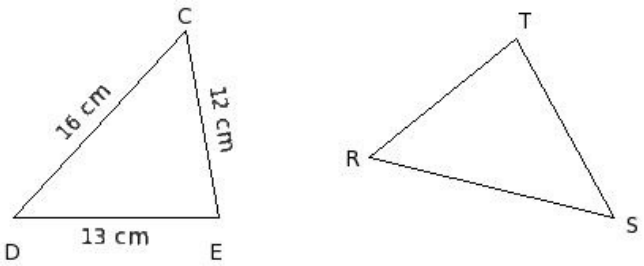
a) ∠T = 79°
b) ∠U = 59°
c) ∠U = 79°
d) ∠V = 59°
e) ∠V = 42°
f) ∠T = 42°



(i) {a,b,e} (ii) {d,b} (iii) {f,c,e} (iv) {d,a,b} (v) {c,a}

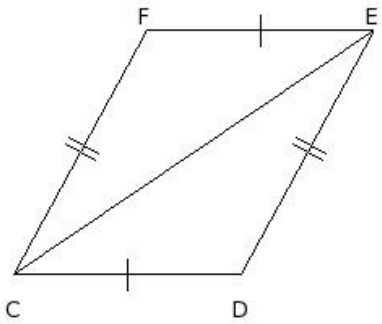
15. In the given figure, △CDE ≅ △RST. Which of the following are true?

a) ST = 13 cm
b) ST = 16 cm
c) RS = 13 cm
d) TR = 16 cm
e) RS = 16 cm
f) TR = 12 cm



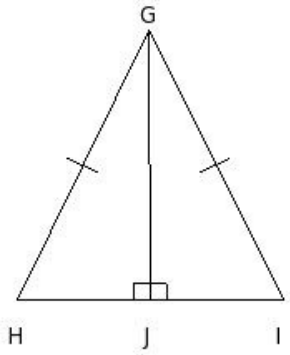
(i) {b,a} (ii) {d,b,f} (iii) {c,e} (iv) {a,e,f} (v) {c,a,e}

16. In the given figure, which of the following is true?



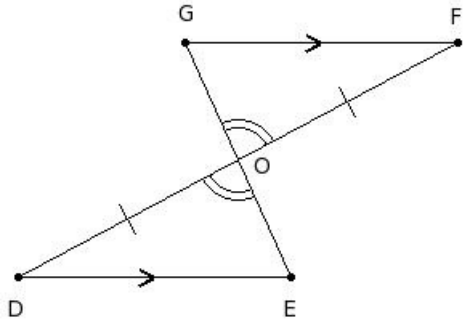
(i) △CFE ≅ △CDE (ii) △CEF ≅ △ECD (iii) △CEF ≅ △CED (iv) △CEF ≅ △CDE (v) △CFE ≅ △DEC

17. With the data in the given figure, △GHJ ≅ △GIJ by which property?



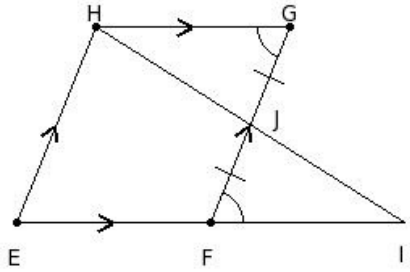
(i) ASA Congruency (ii) SSS Congruency (iii) RHS Congruency (iv) SAS Congruency (v) not congruent

18. With the data in the given figure, △OGF ≅ △OED by which property?



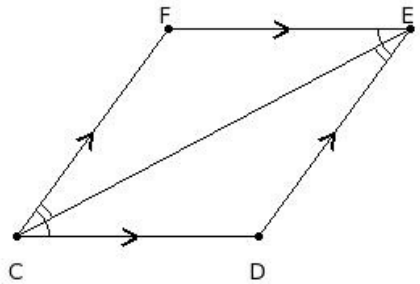
(i) RHS Congruency (ii) ASA Congruency (iii) SSS Congruency (iv) not congruent (v) SAS Congruency

19. With the given data in the figure, △HGJ ≅ △IFJ by which property?



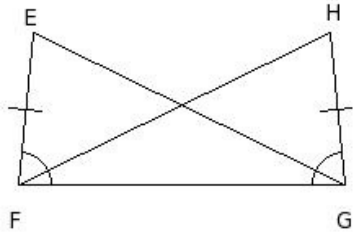
(i) ASA Congruency (ii) RHS Congruency (iii) SSS Congruency (iv) SAS Congruency (v) not congruent

20. With the given data in the figure, △CDE ≅ △EFC by which property?



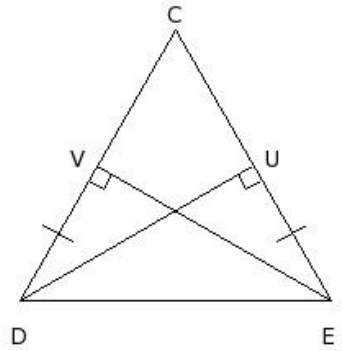
(i) ASA Congruency (ii) SSS Congruency (iii) SAS Congruency (iv) not congruent (v) RHS Congruency

21. With the given data in the figure, △EFG ≅ △HGF by which property?



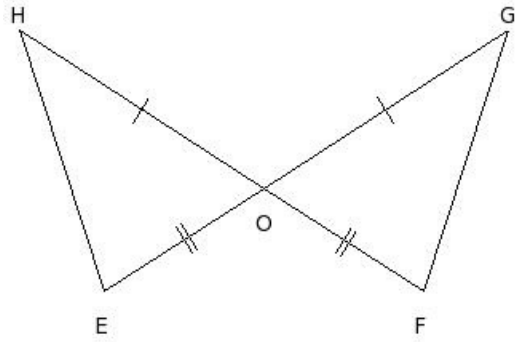
(i) not congruent (ii) SSS Congruency (iii) SAS Congruency (iv) RHS Congruency (v) ASA Congruency

22. With the given data in the figure, △VDE ≅ △UED by which property?



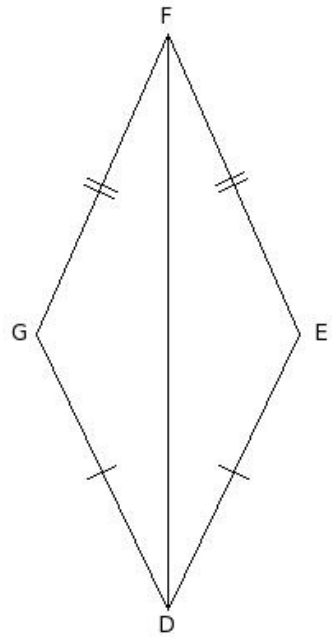
(i) SAS Congruency (ii) not congruent (iii) ASA Congruency (iv) SSS Congruency (v) RHS Congruency

23. With the data in the given figure, △EHO ≅ △FGO by which property?



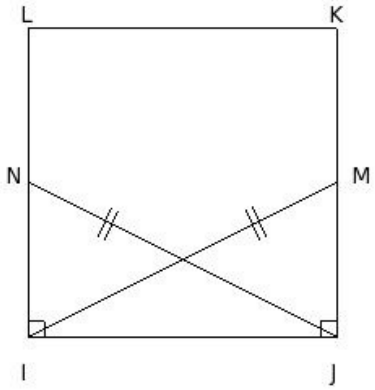
(i) RHS Congruency (ii) not congruent (iii) SSS Congruency (iv) ASA Congruency (v) SAS Congruency

24. With the data in the given figure, △DGF ≅ △DEF by which property?



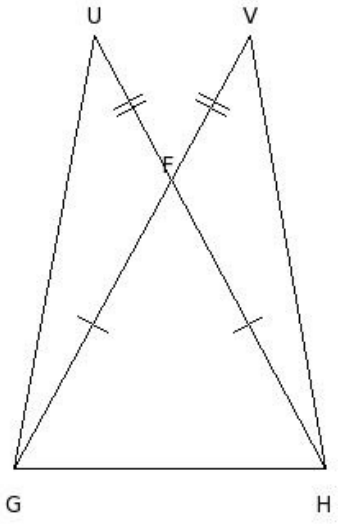
(i) SSS Congruency (ii) SAS Congruency (iii) RHS Congruency (iv) ASA Congruency (v) not congruent

25. With the data in the given figure, △NIJ ≅ △MJI by which property?



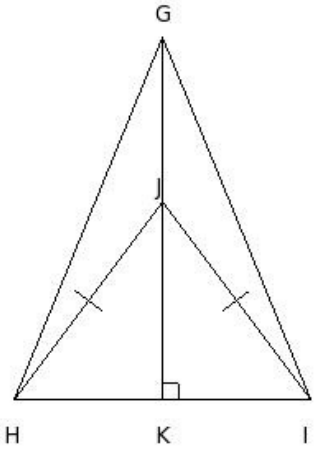
(i) ASA Congruency (ii) SSS Congruency (iii) SAS Congruency (iv) RHS Congruency (v) not congruent

26. With the data in the given figure, △UGH ≅ △VHG by which property?



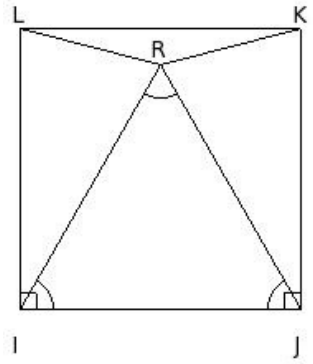
(i) SSS Congruency (ii) not congruent (iii) RHS Congruency (iv) ASA Congruency (v) SAS Congruency

27. In the given figure, △JHI is an isosceles triangle. GK ⊥ HI passing through J. △GJH ≅ △GJI by which property?



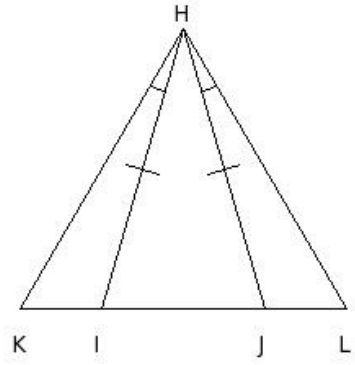
(i) SSS Congruency (ii) not congruent (iii) ASA Congruency (iv) RHS Congruency (v) SAS Congruency

28. In the given figure, IJKL is a square and △RIJ is an equilateral triangle. △RLI ≅ △RKJ by which property?



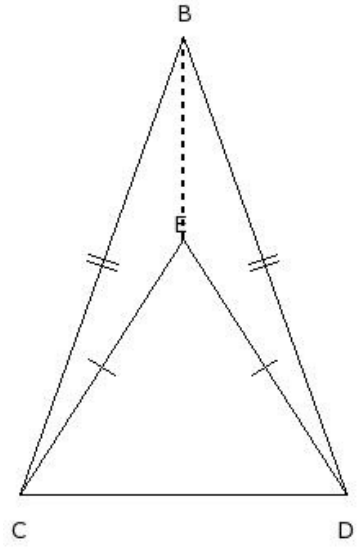
(i) not congruent (ii) ASA Congruency (iii) SAS Congruency (iv) RHS Congruency (v) SSS Congruency

29. With the data in the given figure, △HIK ≅ △HJL by which property?



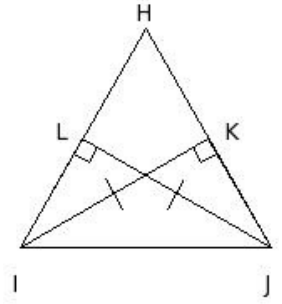
(i) SSS Congruency (ii) RHS Congruency (iii) SAS Congruency (iv) not congruent (v) ASA Congruency

30. With the data in the given figure, △BEC ≅ △BED by which property?



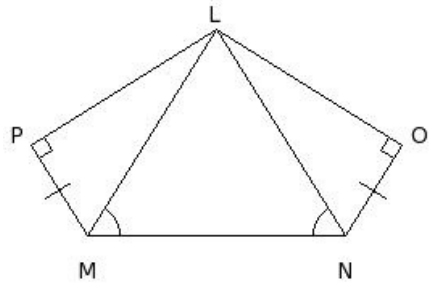
(i) not congruent (ii) SSS Congruency (iii) RHS Congruency (iv) ASA Congruency (v) SAS Congruency

31. With the data in the given figure, △IKJ ≅ △JLI by which property?



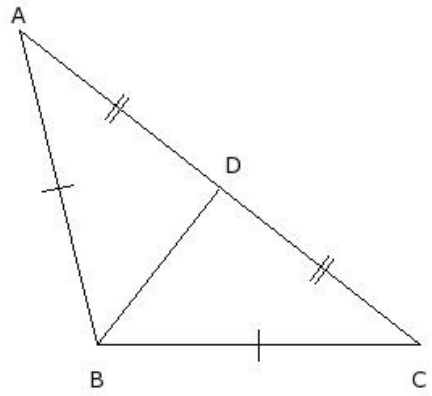
(i) RHS Congruency (ii) ASA Congruency (iii) SAS Congruency (iv) not congruent (v) SSS Congruency

32. With the data in the given figure, △LMP ≅ △LNO by which property?



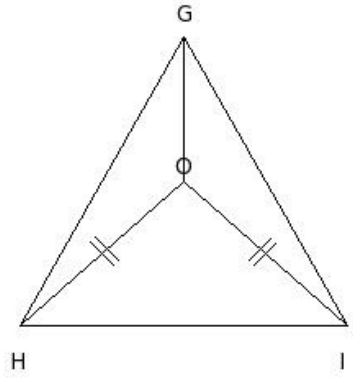
(i) ASA Congruency (ii) RHS Congruency (iii) not congruent (iv) SSS Congruency (v) SAS Congruency

33. In the given figure, △ABC is an obtuse angled triangle. △ABD ≅ △CBD by which property?



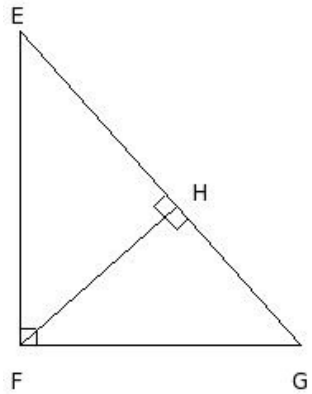
(i) SSS Congruency (ii) SAS Congruency (iii) ASA Congruency (iv) not congruent (v) RHS Congruency

34. With the data in the given figure, △GOH ≅ △GOI by which property?



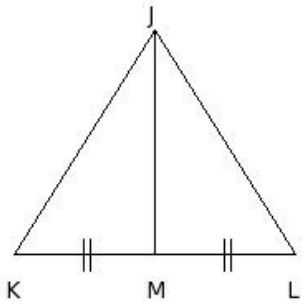
(i) ASA Congruency (ii) RHS Congruency (iii) SSS Congruency (iv) not congruent (v) SAS Congruency

35. With the data in the figure, △EHF ≅ △GHF by which property?



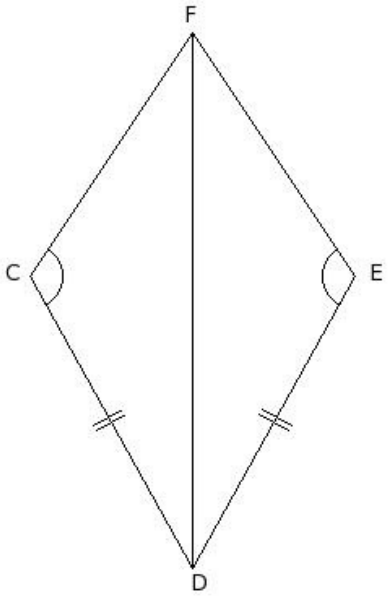
(i) ASA Congruency (ii) not congruent (iii) RHS Congruency (iv) SSS Congruency (v) SAS Congruency

36. With the data in the figure, △JMK ≅ △JML by which property?



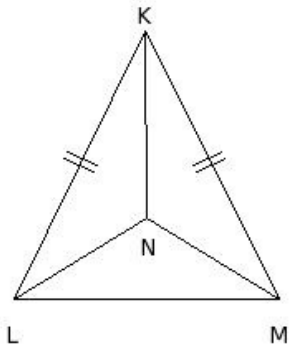
(i) SSS Congruency (ii) ASA Congruency (iii) RHS Congruency (iv) SAS Congruency (v) not congruent

37. With the data in the figure, △CFD ≅ △EFD by which property?



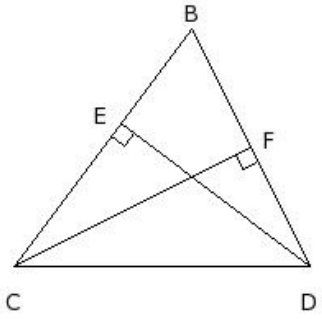
(i) ASA Congruency (ii) SAS Congruency (iii) RHS Congruency (iv) SSS Congruency (v) not congruent

38. With the data in the figure, △KLN ≅ △KMN by which property?



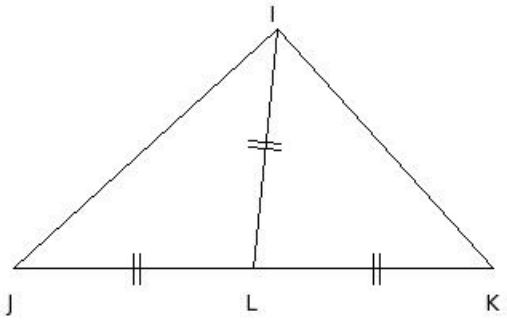
(i) not congruent (ii) RHS Congruency (iii) ASA Congruency (iv) SAS Congruency (v) SSS Congruency

39. With the data in the figure, △CFD ≅ △DEC by which property?



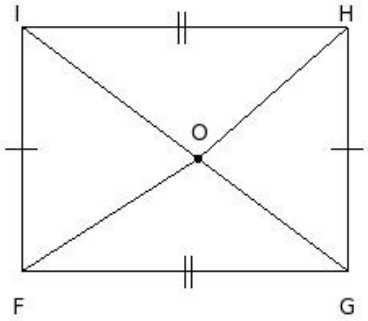
(i) SSS Congruency (ii) ASA Congruency (iii) SAS Congruency (iv) not congruent (v) RHS Congruency

40. With the data in the figure, △ILJ ≅ △ILK by which property?



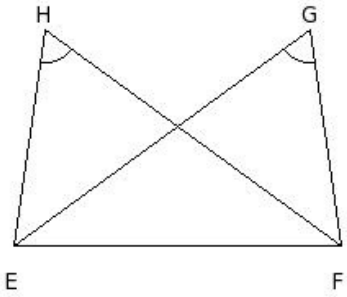
(i) SSS Congruency (ii) ASA Congruency (iii) not congruent (iv) SAS Congruency (v) RHS Congruency

41. With the data in the figure, △FOG ≅ △IOH by which property?



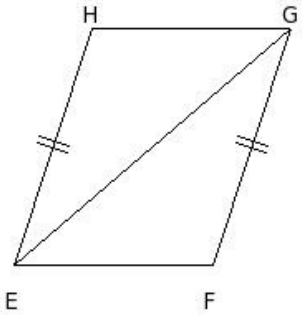
(i) SSS Congruency (ii) RHS Congruency (iii) ASA Congruency (iv) SAS Congruency (v) not congruent

42. With the data in the figure, △EFH ≅ △FEG by which property?



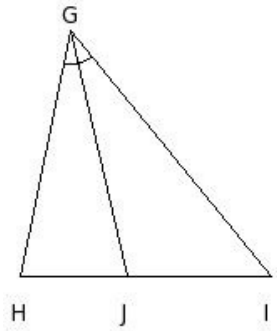
(i) not congruent (ii) SAS Congruency (iii) ASA Congruency (iv) RHS Congruency (v) SSS Congruency

43. With the data in the figure, △EGH ≅ △GEF by which property?



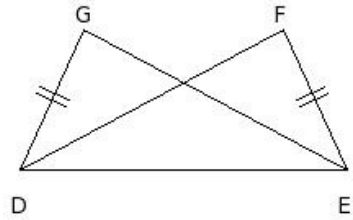
(i) not congruent (ii) SSS Congruency (iii) RHS Congruency (iv) SAS Congruency (v) ASA Congruency

44. With the data in the figure, △GJH ≅ △GJI by which property?



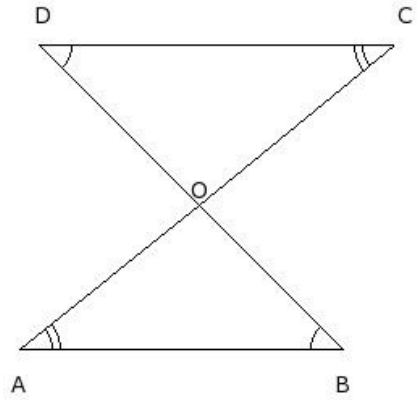
(i) not congruent (ii) ASA Congruency (iii) RHS Congruency (iv) SSS Congruency (v) SAS Congruency

45. With the data in the figure, △DGE ≅ △EFD by which property?



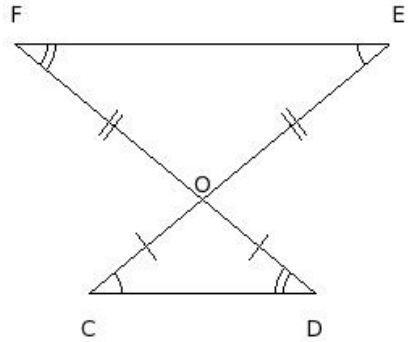
(i) SAS Congruency (ii) RHS Congruency (iii) ASA Congruency (iv) not congruent (v) SSS Congruency

46. With the data in the figure, △AOB ≅ △COD by which property?



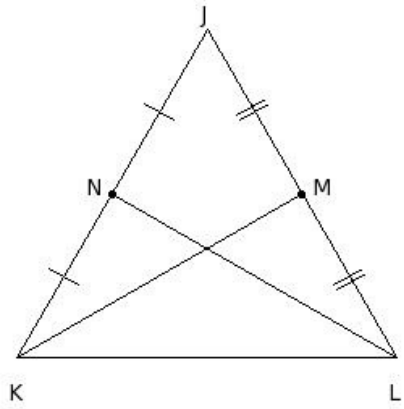
(i) ASA Congruency (ii) RHS Congruency (iii) not congruent (iv) SAS Congruency (v) SSS Congruency

47. With the data in the figure, △COD ≅ △EOF by which property?



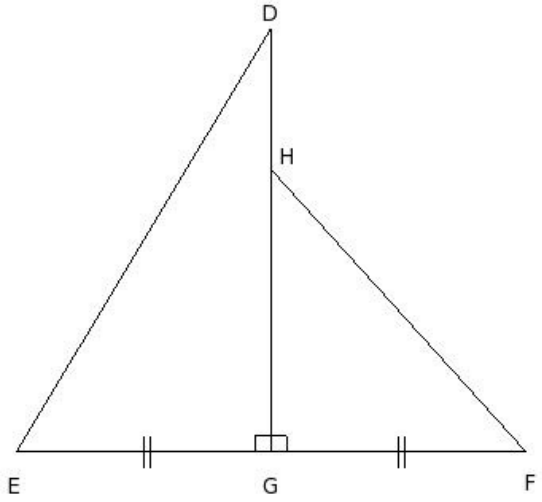
(i) SSS Congruency (ii) SAS Congruency (iii) RHS Congruency (iv) not congruent (v) ASA Congruency

48. With the data in the figure, △KLN ≅ △LKM by which property?



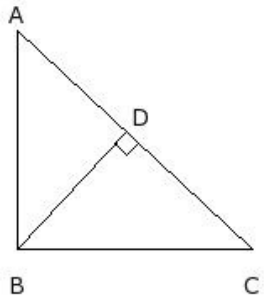
(i) SAS Congruency (ii) ASA Congruency (iii) SSS Congruency (iv) RHS Congruency (v) not congruent

49. With the data in the figure, △DEG ≅ △HFG by which property?



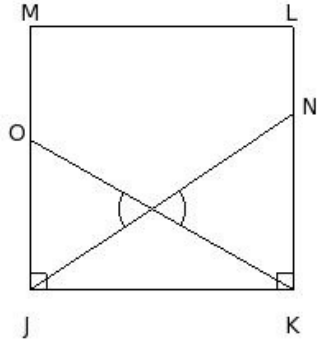
(i) SAS Congruency (ii) not congruent (iii) RHS Congruency (iv) SSS Congruency (v) ASA Congruency

50. With the data in the figure, △ABD ≅ △CBD by which property?



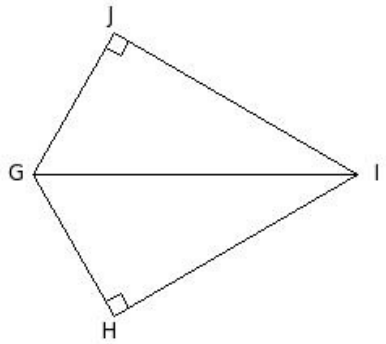
(i) RHS Congruency (ii) SSS Congruency (iii) SAS Congruency (iv) ASA Congruency (v) not congruent

51. With the data in the figure, △JKN ≅ △KJO by which property?



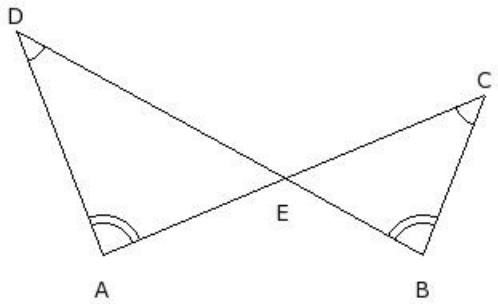
(i) ASA Congruency (ii) SAS Congruency (iii) not congruent (iv) RHS Congruency (v) SSS Congruency

52. With the data in the figure, △GIJ ≅ △GIH by which property?



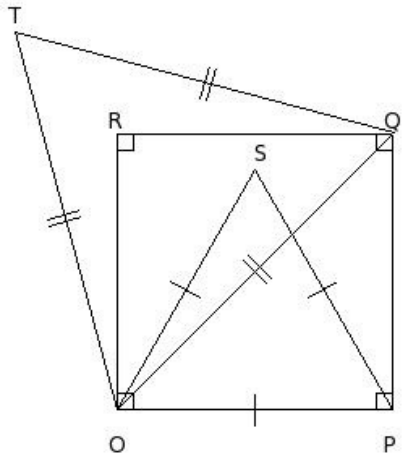
(i) not congruent (ii) SAS Congruency (iii) ASA Congruency (iv) SSS Congruency (v) RHS Congruency

53. With the data in the figure, △AED ≅ △BEC by which property?



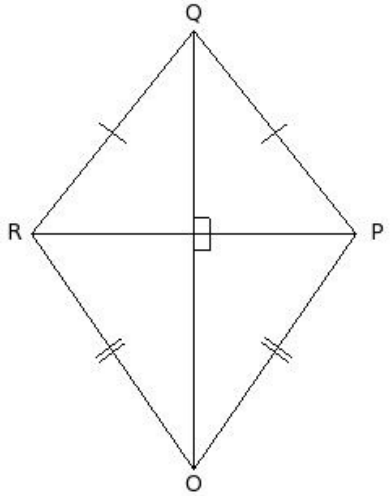
(i) ASA Congruency (ii) SSS Congruency (iii) SAS Congruency (iv) not congruent (v) RHS Congruency

54. With the data in the figure, △OPS ≅ △OQT by which property?



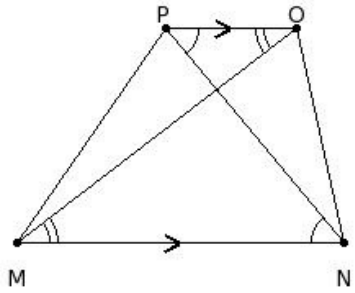
(i) ASA Congruency (ii) not congruent (iii) RHS Congruency (iv) SAS Congruency (v) SSS Congruency

55. With the data in the given figure, △OPR ≅ △QPR by which property?



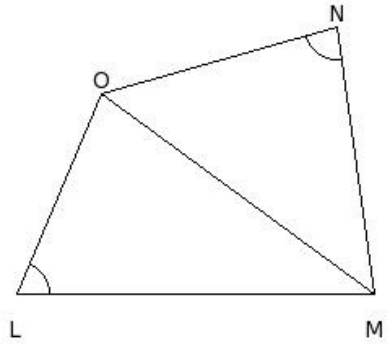
(i) SAS Congruency (ii) not congruent (iii) RHS Congruency (iv) SSS Congruency (v) ASA Congruency

56. With the data in the given figure, △MNP ≅ △NMO by which property?



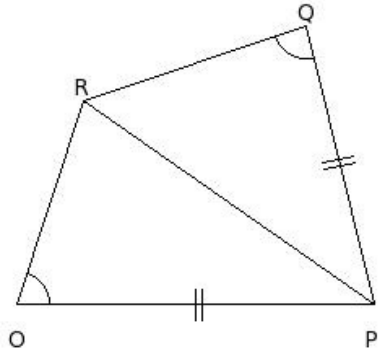
(i) SAS Congruency (ii) RHS Congruency (iii) ASA Congruency (iv) not congruent (v) SSS Congruency

57. With the data in the given figure, △LMO ≅ △NOM by which property?



(i) RHS Congruency (ii) not congruent (iii) ASA Congruency (iv) SAS Congruency (v) SSS Congruency

58. With the data in the given figure, △OPR ≅ △QPR by which property?



(i) not congruent (ii) SAS Congruency (iii) SSS Congruency (iv) RHS Congruency (v) ASA Congruency

59. In the given figure, which pair of triangles are not congruent ?

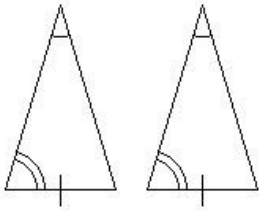


fig 3

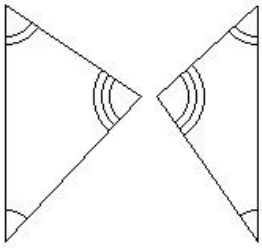


fig 4

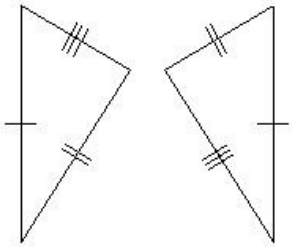


fig 1

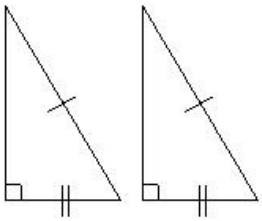


fig 2

(i) fig 2 (ii) fig 3 (iii) fig 4 (iv) fig 1

60. In the given figure, which pair of triangles are not congruent ?

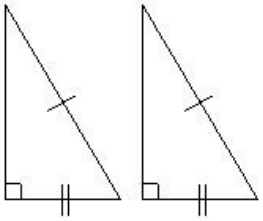


fig 3

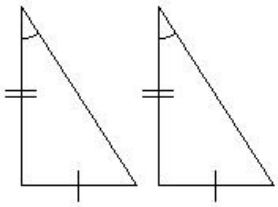


fig 4

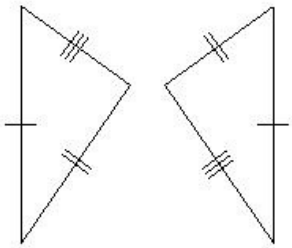


fig 1

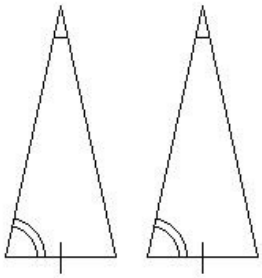


fig 2

(i) fig 3 (ii) fig 2 (iii) fig 1 (iv) fig 4

61. In the given figure, which pair of triangles are not congruent ?

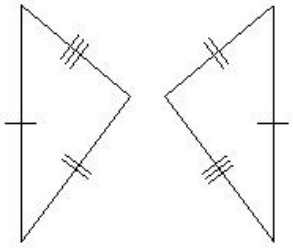


fig 3

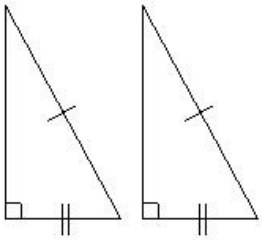


fig 4

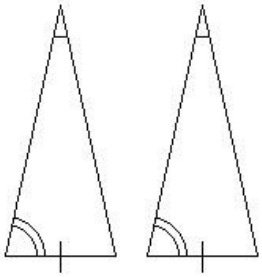


fig 1

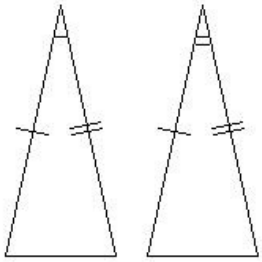


fig 2

(i) fig 1 (ii) fig 3 (iii) fig 2 (iv) fig 4

Assignment Key

1) (ii)	2) (i)	3) (iii)	4) (i)	5) (iv)	6) (ii)
7) (ii)	8) (i)	9) (iv)	10) (iii)	11) (i)	12) (iv)
13) (iv)	14) (i)	15) (iv)	16) (ii)	17) (iii)	18) (ii)
19) (i)	20) (i)	21) (iii)	22) (v)	23) (v)	24) (i)
25) (iv)	26) (v)	27) (v)	28) (iii)	29) (v)	30) (ii)
31) (i)	32) (ii)	33) (i)	34) (iv)	35) (ii)	36) (v)
37) (v)	38) (i)	39) (iv)	40) (iii)	41) (v)	42) (i)
43) (i)	44) (i)	45) (iv)	46) (iii)	47) (iv)	48) (v)
49) (ii)	50) (v)	51) (iii)	52) (i)	53) (iv)	54) (ii)
55) (ii)	56) (iv)	57) (ii)	58) (i)	59) (iii)	60) (iv)
61) (iii)					