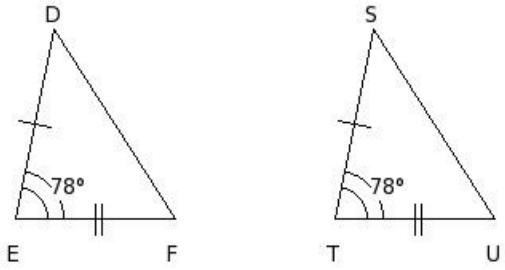
EduSahara™ Assignment

Name : Congruence of Triangles

Chapter : Triangles

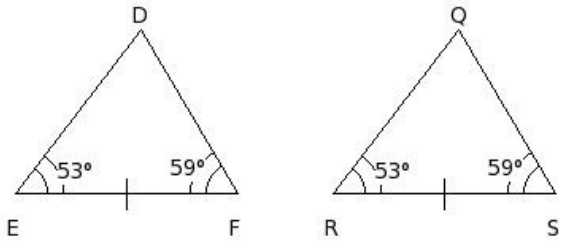
Grade : CBSE Grade IX

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



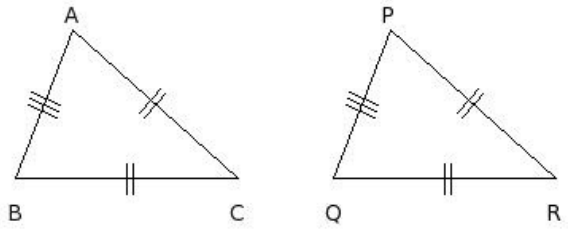
(i) ASA Congruency (ii) SSS Congruency (iii) RHS Congruency (iv) SAS Congruency

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



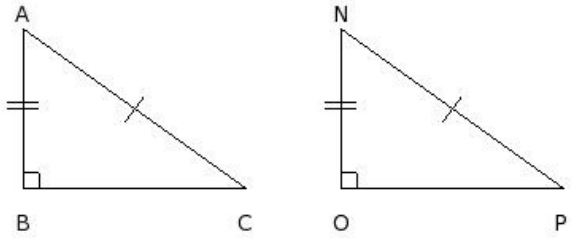
(i) SAS Congruency (ii) RHS Congruency (iii) SSS Congruency (iv) ASA Congruency

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



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

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



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

5. Which of the following are true?

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

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

6. Which of the following are true?

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

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

7. Which of the following are true?

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

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

8. Which of the following are true?

a) Area of the union of two polygonal region is the sum of the individual area.
b) A polygonal region can be divided into a finite number of triangles in a unique way.
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 not equal to the sum of the individual area.

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

9. In the given figure, points H , I and J are the mid-points of sides FG, GE and EF of △EFG. Which of the following are true?

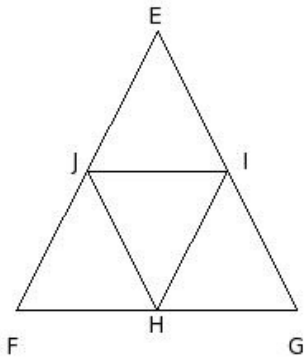
a) Area of trapezium FGIJ is $\frac{1}{4}$ the area of △EFG

b) All four small triangles have equal areas

c) Area of △EFG = $\frac{1}{3}$ area of △HIJ

d) Area of △EFG = 4 times area of △HIJ

e) Area of trapezium FGIJ is thrice the area of △EJI



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

10. In the given figure, points J , K and L are the mid-points of sides HI, IG and GH of △GHI. Which of the following are true?

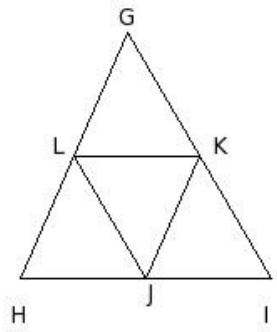
a) △GLK ≅ △JLK

b) △LHJ ≅ △JKL

c) △GLK ≅ △JKL

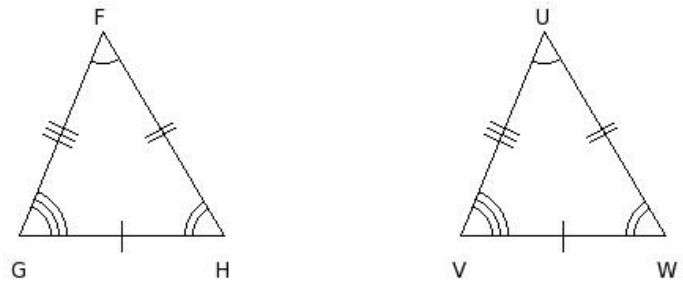
d) △LHJ ≅ △GLK

e) △GLK ≅ △KJI



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

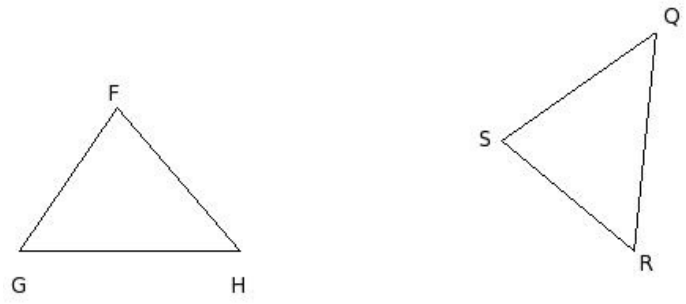
11. In the given figure, which of the following is true?



(i) △FGH ≅ △UVW (ii) △GHF ≅ △UVW (iii) △FGH ≅ △WUV (iv) △FGH ≅ △WVU (v) △FGH ≅ △VWU

12. In the given figure, △FGH ≅ △SRQ. Which of the following are true?

a) ∠H = ∠Q
b) GH = SR
c) GH = RQ
d) ∠G = ∠R
e) ∠F = ∠Q



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

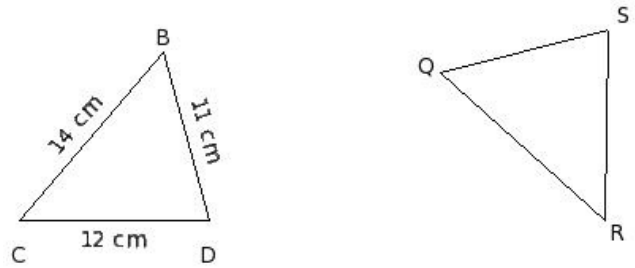
13. In the given figure, △FGH ≅ △TSR. Which of the following are true?

a) ∠T = 83°
b) ∠T = 54°
c) ∠S = 83°
d) ∠S = 43°
e) ∠R = 43°
f) ∠R = 54°

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

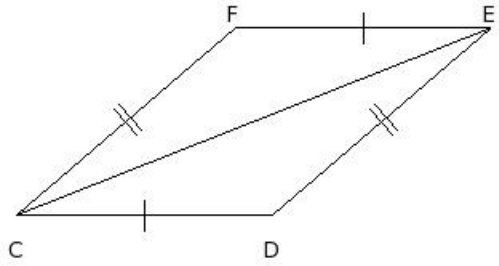
14. In the given figure, △BCD ≅ △QRS. Which of the following are true?

a) QR = 12 cm
b) SQ = 11 cm
c) SQ = 14 cm
d) RS = 14 cm
e) RS = 12 cm
f) QR = 14 cm



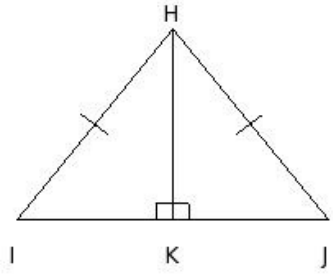
(i) {c,b,e} (ii) {b,e,f} (iii) {c,e} (iv) {d,a,f} (v) {a,b}

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



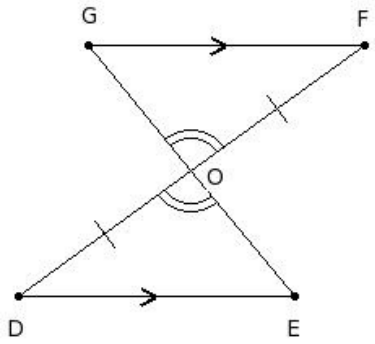
(i) △CFE ≅ △CDE (ii) △CEF ≅ △CDE (iii) △CEF ≅ △CED (iv) △CEF ≅ △ECD (v) △CFE ≅ △DEC

16. With the data in the given figure, △HIK ≅ △HJK by which property?



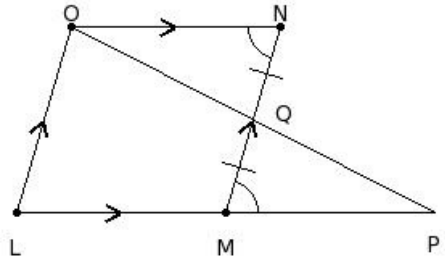
(i) ASA Congruency (ii) SAS Congruency (iii) SSS Congruency (iv) not congruent (v) RHS Congruency

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



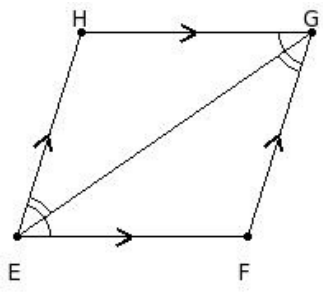
(i) ASA Congruency (ii) not congruent (iii) RHS Congruency (iv) SAS Congruency (v) SSS Congruency

18. With the given data in the figure, △ONQ ≅ △PMQ by which property?



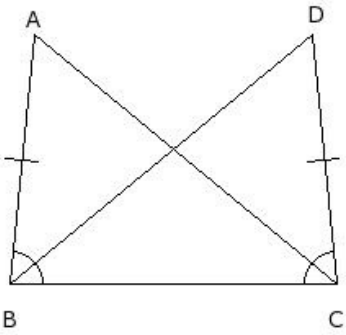
(i) not congruent (ii) RHS Congruency (iii) ASA Congruency (iv) SAS Congruency (v) SSS Congruency

19. With the given data in the figure, △EFG ≅ △GHE by which property?



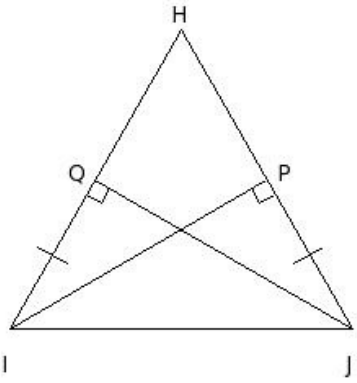
(i) not congruent (ii) RHS Congruency (iii) SAS Congruency (iv) SSS Congruency (v) ASA Congruency

20. With the given data in the figure, △ABC ≅ △DCB by which property?



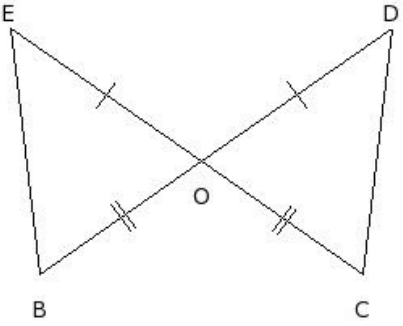
(i) SAS Congruency (ii) RHS Congruency (iii) ASA Congruency (iv) SSS Congruency (v) not congruent

21. With the given data in the figure, △QIJ ≅ △PJI by which property?



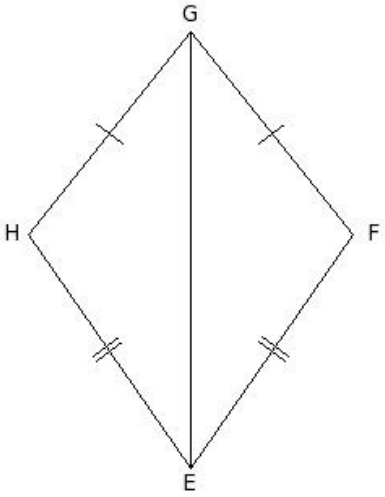
(i) not congruent (ii) RHS Congruency (iii) SSS Congruency (iv) SAS Congruency (v) ASA Congruency

22. With the data in the given figure, △BEO ≅ △CDO by which property?



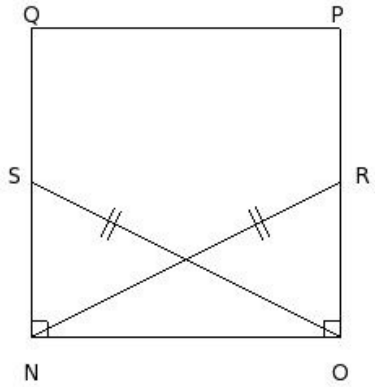
(i) SSS Congruency (ii) not congruent (iii) ASA Congruency (iv) RHS Congruency (v) SAS Congruency

23. With the data in the given figure, △EHG ≅ △EFG by which property?



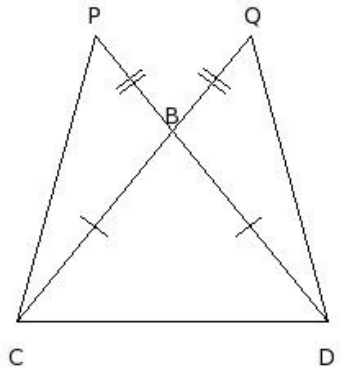
(i) RHS Congruency (ii) ASA Congruency (iii) SAS Congruency (iv) not congruent (v) SSS Congruency

24. With the data in the given figure, △SNO ≅ △RON by which property?



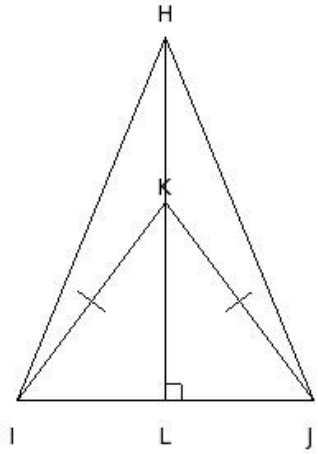
(i) SAS Congruency (ii) SSS Congruency (iii) ASA Congruency (iv) not congruent (v) RHS Congruency

25. With the data in the given figure, △PCD ≅ △QDC by which property?



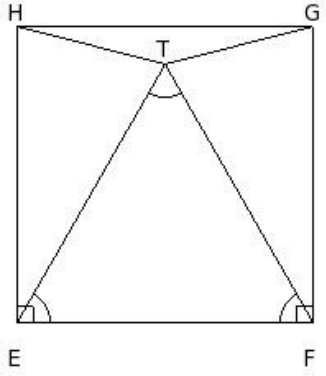
(i) SSS Congruency (ii) SAS Congruency (iii) RHS Congruency (iv) not congruent (v) ASA Congruency

26. In the given figure, △KIJ is an isosceles triangle. HL ⊥ IJ passing through K. △HKI ≅ △HKJ by which property?



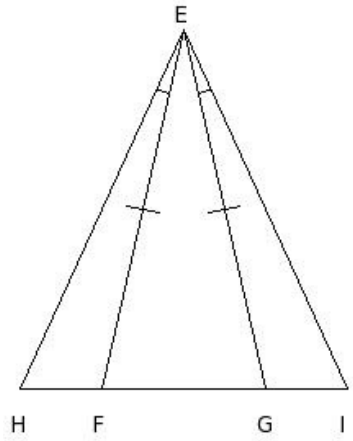
(i) RHS Congruency (ii) not congruent (iii) SSS Congruency (iv) ASA Congruency (v) SAS Congruency

27. In the given figure, EFGH is a square and △TEF is an equilateral triangle. △THE ≅ △TGF by which property?



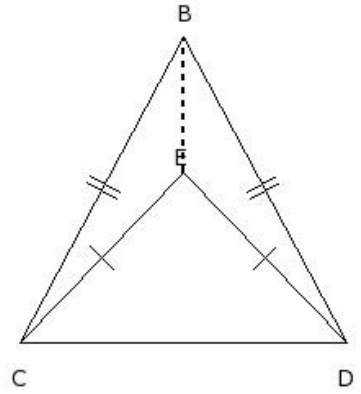
(i) SAS Congruency (ii) RHS Congruency (iii) ASA Congruency (iv) SSS Congruency (v) not congruent

28. With the data in the given figure, △EFH ≅ △EGI by which property?



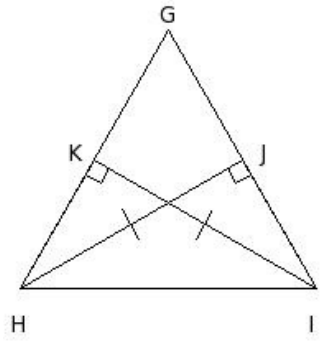
(i) not congruent (ii) RHS Congruency (iii) ASA Congruency (iv) SSS Congruency (v) SAS Congruency

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



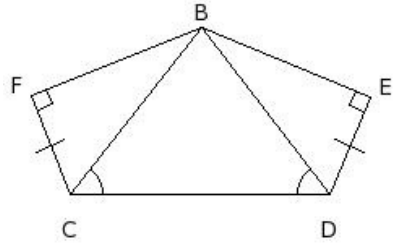
(i) SSS Congruency (ii) not congruent (iii) ASA Congruency (iv) SAS Congruency (v) RHS Congruency

30. With the data in the given figure, △HJI ≅ △IKH by which property?



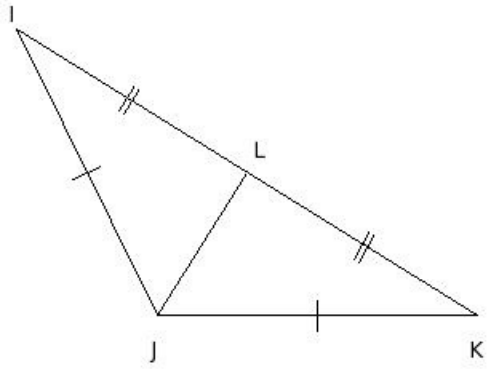
(i) not congruent (ii) RHS Congruency (iii) SSS Congruency (iv) ASA Congruency (v) SAS Congruency

31. With the data in the given figure, △BCF ≅ △BDE by which property?



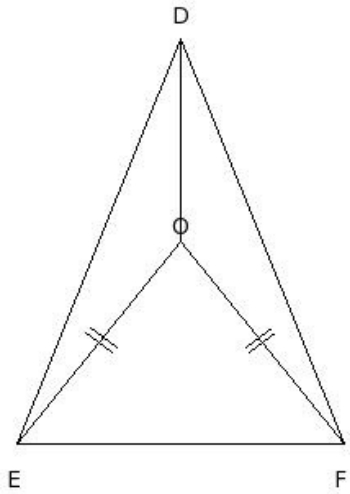
(i) not congruent (ii) RHS Congruency (iii) SSS Congruency (iv) SAS Congruency (v) ASA Congruency

32. In the given figure, △IJK is an obtuse angled triangle. △IJL ≅ △KJL by which property?



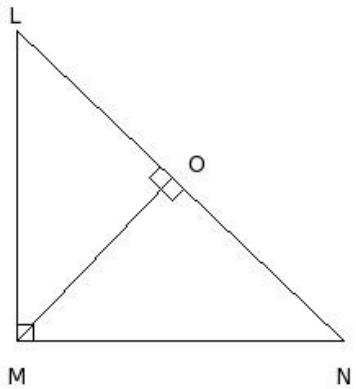
(i) ASA Congruency (ii) RHS Congruency (iii) SSS Congruency (iv) not congruent (v) SAS Congruency

33. With the data in the given figure, △DOE ≅ △DOF by which property?



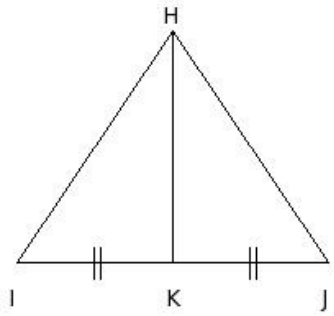
(i) not congruent (ii) ASA Congruency (iii) SSS Congruency (iv) SAS Congruency (v) RHS Congruency

34. With the data in the figure, △LOM ≅ △NOM by which property?



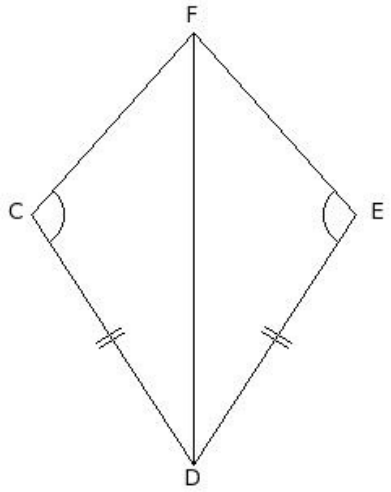
(i) RHS Congruency (ii) ASA Congruency (iii) SAS Congruency (iv) SSS Congruency (v) not congruent

35. With the data in the figure, △HKI ≅ △HKJ by which property?



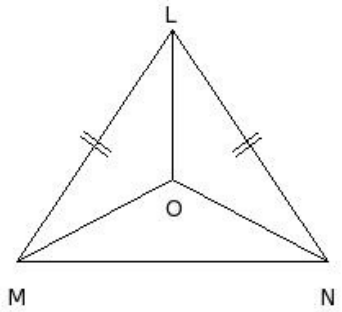
(i) SSS Congruency (ii) not congruent (iii) SAS Congruency (iv) ASA Congruency (v) RHS Congruency

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



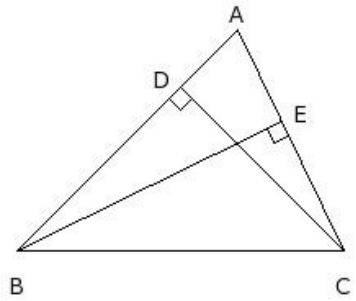
(i) SAS Congruency (ii) not congruent (iii) RHS Congruency (iv) SSS Congruency (v) ASA Congruency

37. With the data in the figure, △LMO ≅ △LNO by which property?



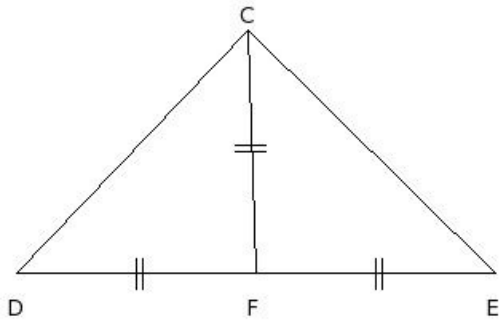
(i) not congruent (ii) SSS Congruency (iii) RHS Congruency (iv) SAS Congruency (v) ASA Congruency

38. With the data in the figure, △BEC ≅ △CDB by which property?



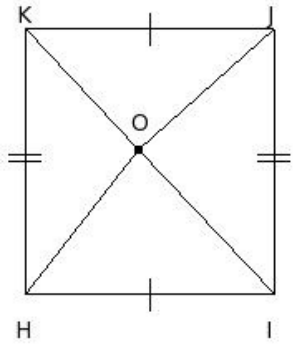
(i) SSS Congruency (ii) RHS Congruency (iii) SAS Congruency (iv) ASA Congruency (v) not congruent

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



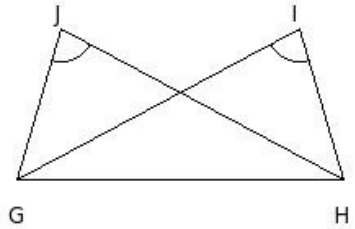
(i) ASA Congruency (ii) not congruent (iii) RHS Congruency (iv) SAS Congruency (v) SSS Congruency

40. With the data in the figure, △HOI ≅ △KOJ by which property?



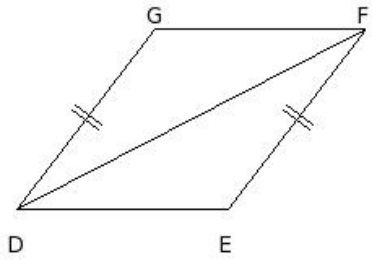
(i) SAS Congruency (ii) SSS Congruency (iii) not congruent (iv) ASA Congruency (v) RHS Congruency

41. With the data in the figure, △GHJ ≅ △HGI by which property?



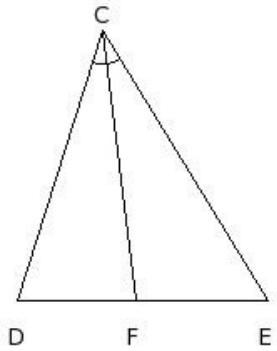
(i) SAS Congruency (ii) ASA Congruency (iii) RHS Congruency (iv) SSS Congruency (v) not congruent

42. With the data in the figure, △DFG ≅ △FDE by which property?



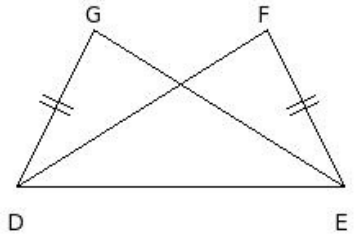
(i) SAS Congruency (ii) not congruent (iii) RHS Congruency (iv) SSS Congruency (v) ASA Congruency

43. With the data in the figure, △CFD ≅ △CFE by which property?



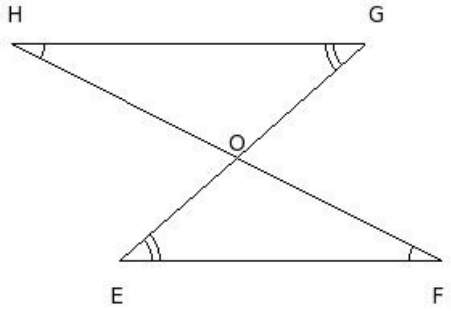
(i) not congruent (ii) SSS Congruency (iii) SAS Congruency (iv) RHS Congruency (v) ASA Congruency

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



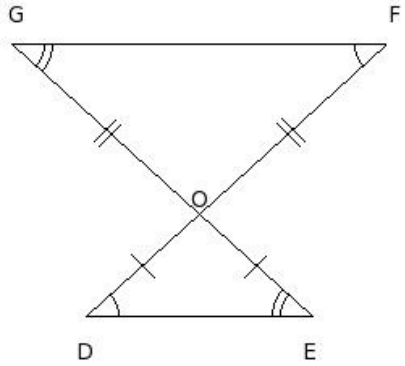
(i) SSS Congruency (ii) RHS Congruency (iii) not congruent (iv) SAS Congruency (v) ASA Congruency

45. With the data in the figure, △EOF ≅ △GOH by which property?



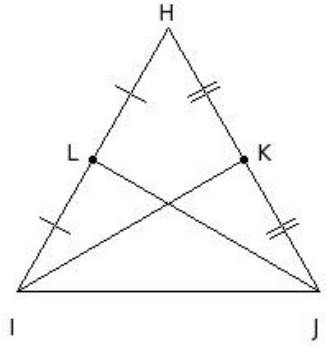
(i) RHS Congruency (ii) SSS Congruency (iii) ASA Congruency (iv) not congruent (v) SAS Congruency

46. With the data in the figure, △DOE ≅ △FOG by which property?



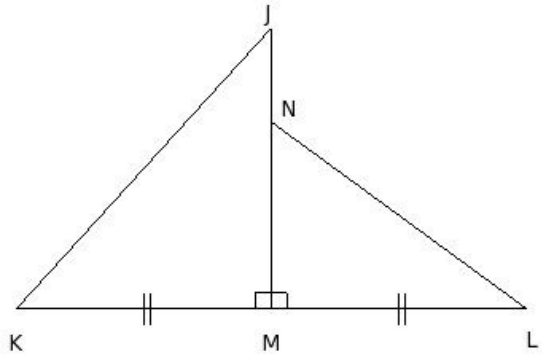
(i) not congruent (ii) SSS Congruency (iii) RHS Congruency (iv) ASA Congruency (v) SAS Congruency

47. With the data in the figure, △IJL ≅ △JIK by which property?



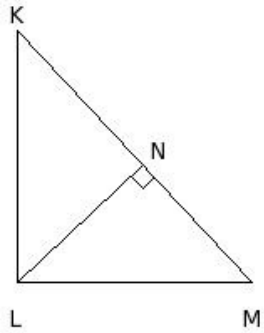
(i) not congruent (ii) SSS Congruency (iii) RHS Congruency (iv) ASA Congruency (v) SAS Congruency

48. With the data in the figure, △JKM ≅ △NLM by which property?



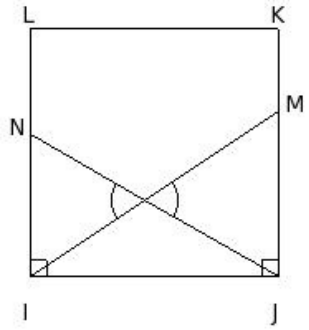
(i) SSS Congruency (ii) SAS Congruency (iii) ASA Congruency (iv) RHS Congruency (v) not congruent

49. With the data in the figure, △KLN ≅ △MLN by which property?



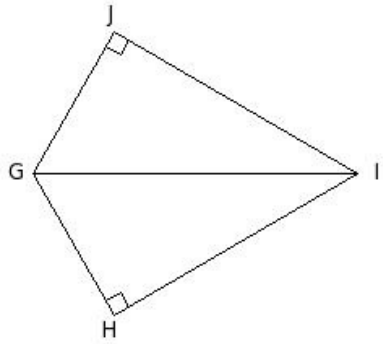
(i) not congruent (ii) SSS Congruency (iii) ASA Congruency (iv) SAS Congruency (v) RHS Congruency

50. With the data in the figure, △IJM ≅ △JIN by which property?



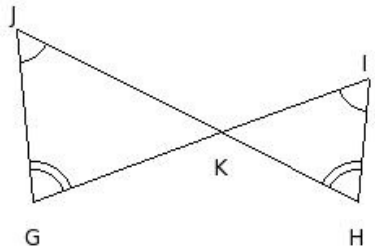
(i) SSS Congruency (ii) RHS Congruency (iii) SAS Congruency (iv) not congruent (v) ASA Congruency

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



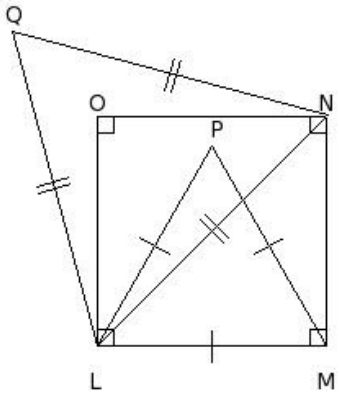
(i) RHS Congruency (ii) ASA Congruency (iii) SAS Congruency (iv) SSS Congruency (v) not congruent

52. With the data in the figure, △GKJ ≅ △HKI by which property?



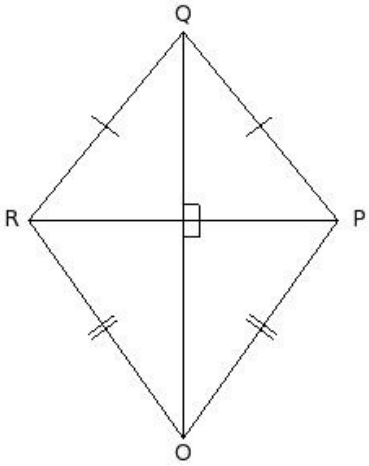
(i) SSS Congruency (ii) ASA Congruency (iii) RHS Congruency (iv) not congruent (v) SAS Congruency

53. With the data in the figure, △LMP ≅ △LNQ by which property?



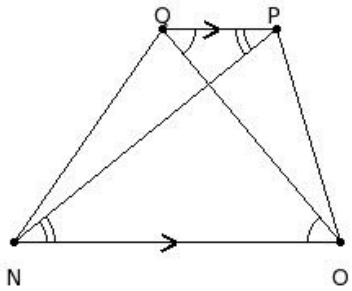
(i) RHS Congruency (ii) not congruent (iii) SSS Congruency (iv) SAS Congruency (v) ASA Congruency

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



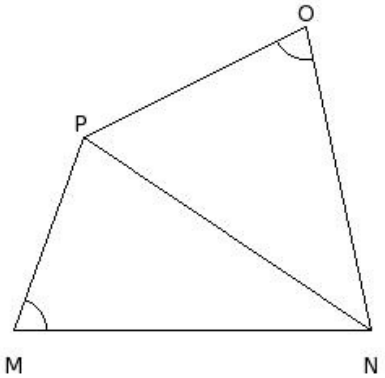
(i) SAS Congruency (ii) SSS Congruency (iii) ASA Congruency (iv) RHS Congruency (v) not congruent

55. With the data in the given figure, △NOQ ≅ △ONP by which property?



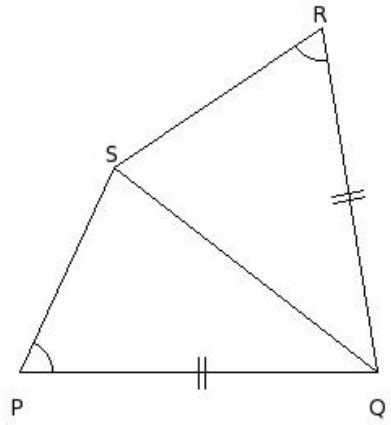
(i) SSS Congruency (ii) not congruent (iii) RHS Congruency (iv) ASA Congruency (v) SAS Congruency

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



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

57. With the data in the given figure, $\triangle PQS \cong \triangle RQS$ by which property?



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

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

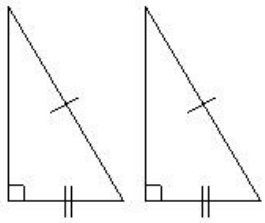


fig 3

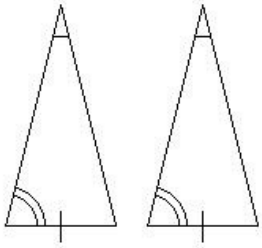


fig 4

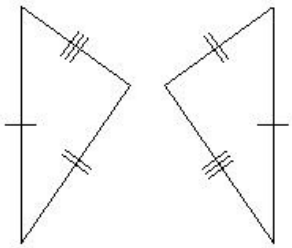


fig 1

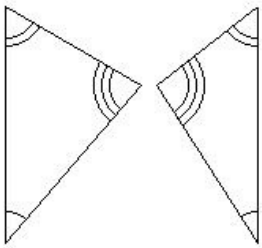


fig 2

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

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

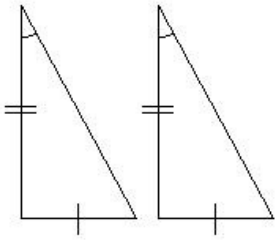


fig 3

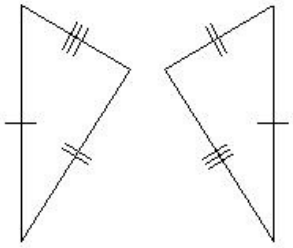


fig 4

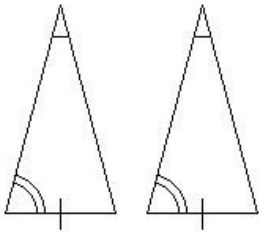


fig 1

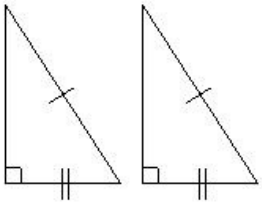


fig 2

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

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

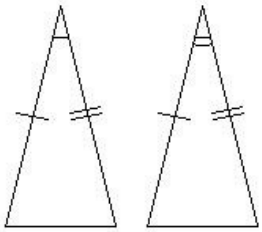


fig 3

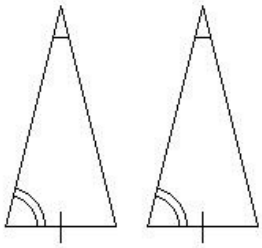


fig 4

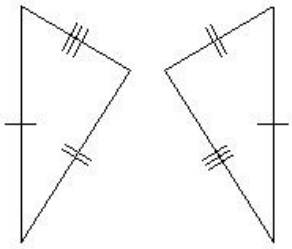


fig 1

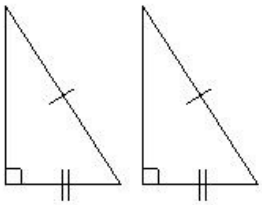


fig 2

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

Assignment Key

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