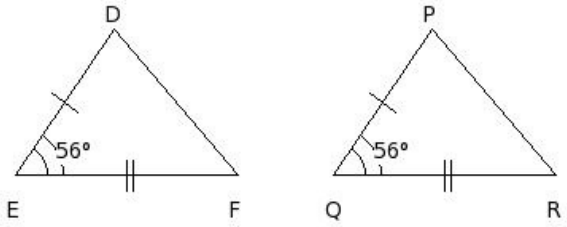
EduSahara™ Assignment

Name : Congruence of Triangles

Chapter : Triangles

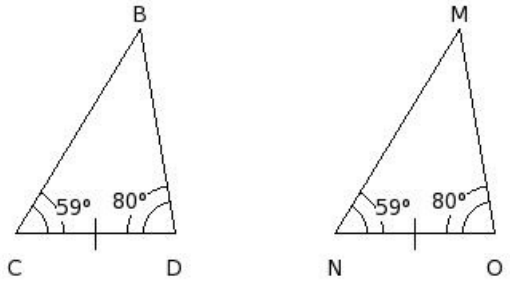
Grade : ICSE Grade IX

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



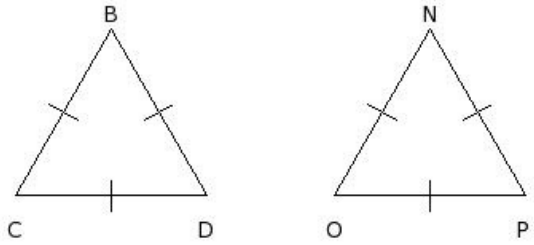
(i) RHS Congruency (ii) SSS Congruency (iii) ASA Congruency (iv) SAS Congruency

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



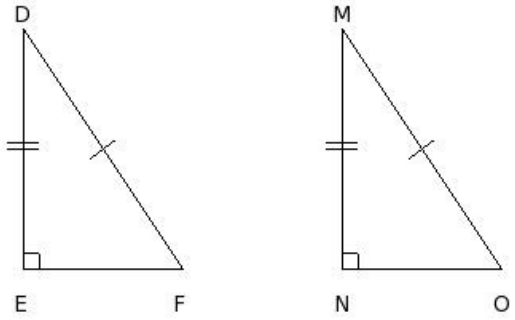
(i) RHS Congruency (ii) SSS Congruency (iii) ASA Congruency (iv) SAS Congruency

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



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

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



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

5. Which of the following are true?

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

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

6. Which of the following are true?

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

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

7. Which of the following are true?

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

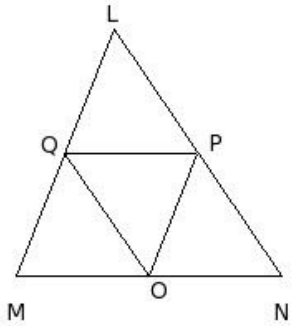
(i) {a,c,d} (ii) {b,e,d} (iii) {b,a,c} (iv) {b,a} (v) {e,c}

8. Which of the following are true?

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

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

9. In the given figure, the area of the $\triangle$LMN is x sq.cm. O,P,Q are the mid-points of the sides MN , NL and LM respectively. The area of the $\triangle$OPQ is



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

(v) $\frac{1}{4}$ of area of $\triangle$LMN

10. If the ratio of the bases of two triangles is F : G and the ratio of the corresponding heights is H : I , the ratio of their areas in the same order is

(i) FI : GH (ii) HI : FG (iii) FG : HI (iv) FH : GI (v) GH : FI

11. In the given figure, points M , N and O are the mid-points of sides KL, LJ and JK of △JKL. Which of the following are true?

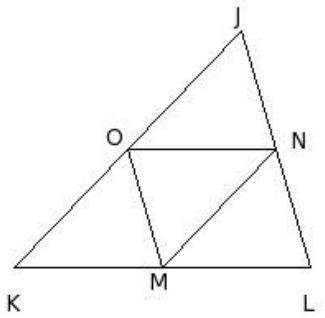
a) Area of △JKL = 4 times area of △MNO

b) Area of $\triangle JKL = \frac{1}{3}$ area of △MNO

c) All four small triangles have equal areas

d) Area of trapezium KLNO is $\frac{1}{4}$ the area of △JKL

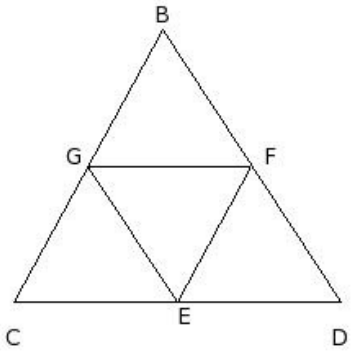
e) Area of trapezium KLNO is thrice the area of △JON



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

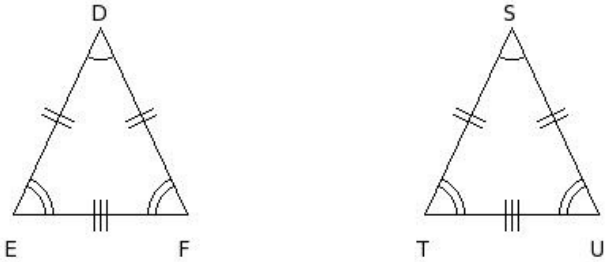
12. In the given figure, points E , F and G are the mid-points of sides CD, DB and BC of △BCD. Which of the following are true?

a) △BGF ≅ △EGF
b) △BGF ≅ △FED
c) △BGF ≅ △EFG
d) △GCE ≅ △EFG
e) △GCE ≅ △BGF



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

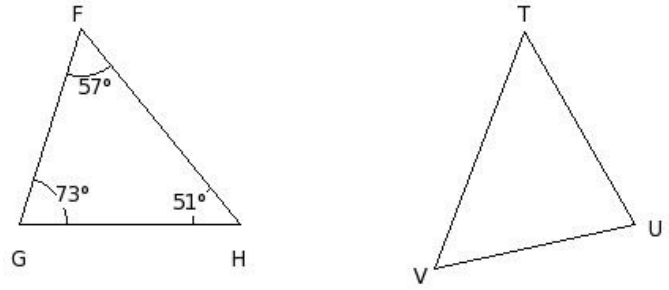
13. In the given figure, which of the following is true?



(i) △DEF ≅ △TUS (ii) △DEF ≅ △UST (iii) △DEF ≅ △STU (iv) △EFD ≅ △STU (v) △DEF ≅ △UTS

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

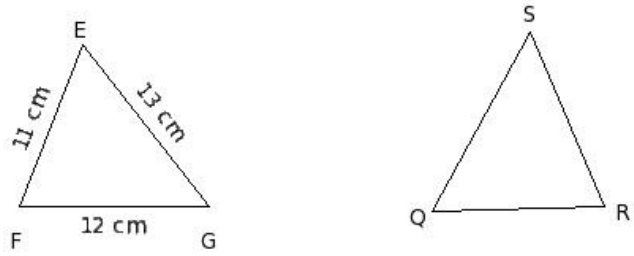
a) ∠V = 57°
b) ∠U = 73°
c) ∠T = 51°
d) ∠T = 57°
e) ∠V = 73°
f) ∠U = 51°



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

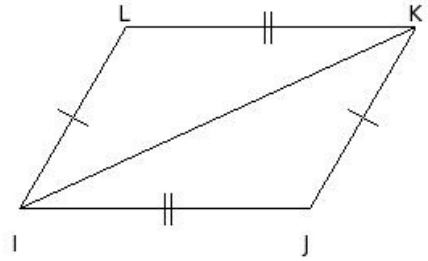
15. In the given figure, △EFG ≅ △QRS. Which of the following are true?

a) QR = 11 cm
b) RS = 11 cm
c) SQ = 13 cm
d) SQ = 11 cm
e) QR = 12 cm
f) RS = 12 cm



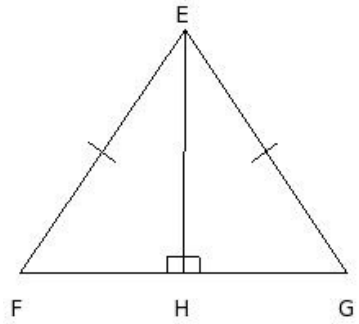
(i) {a,c,f} (ii) {d,a,c} (iii) {d,c} (iv) {b,a} (v) {e,b,f}

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



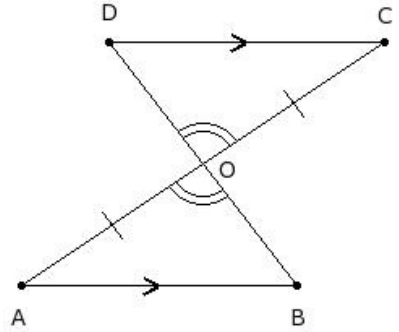
(i) △ILK ≅ △IJK (ii) △IKL ≅ △IKJ (iii) △ILK ≅ △JKI (iv) △IKL ≅ △IJK (v) △IKL ≅ △KIJ

17. With the data in the given figure, △EFH ≅ △EGH by which property?



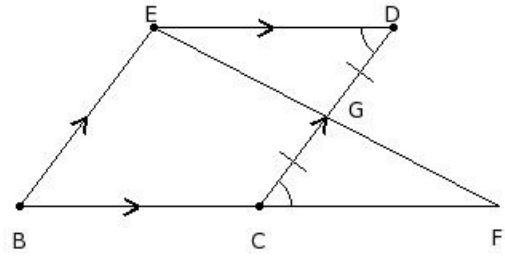
(i) SSS Congruency (ii) ASA Congruency (iii) RHS Congruency (iv) not congruent (v) SAS Congruency

18. With the data in the given figure, △ODC ≅ △OBA by which property?



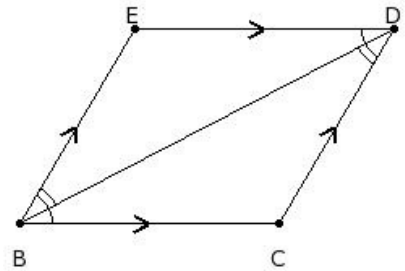
(i) not congruent (ii) RHS Congruency (iii) ASA Congruency (iv) SSS Congruency (v) SAS Congruency

19. With the given data in the figure, △EDG ≅ △FCG by which property?



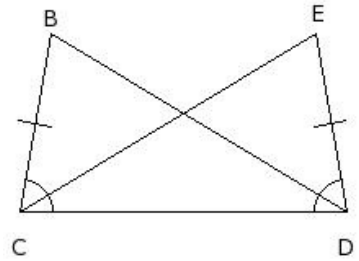
(i) SSS Congruency (ii) SAS Congruency (iii) ASA Congruency (iv) RHS Congruency (v) not congruent

20. With the given data in the figure, △BCD ≅ △DEB by which property?



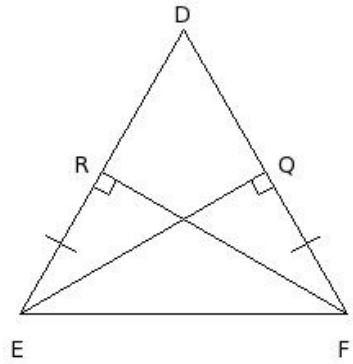
(i) SSS Congruency (ii) not congruent (iii) RHS Congruency (iv) SAS Congruency (v) ASA Congruency

21. With the given data in the figure, △BCD ≅ △EDC by which property?



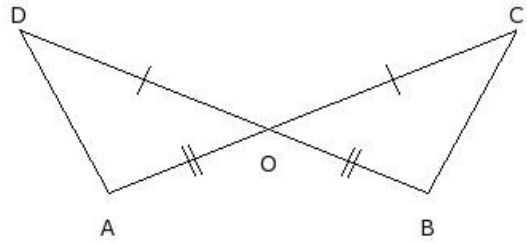
(i) not congruent (ii) ASA Congruency (iii) SAS Congruency (iv) SSS Congruency (v) RHS Congruency

22. With the given data in the figure, △REF ≅ △QFE by which property?



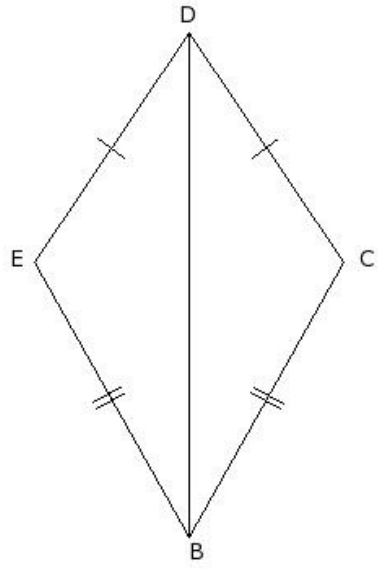
(i) SSS Congruency (ii) ASA Congruency (iii) SAS Congruency (iv) RHS Congruency (v) not congruent

23. With the data in the given figure, △ADO ≅ △BCO by which property?



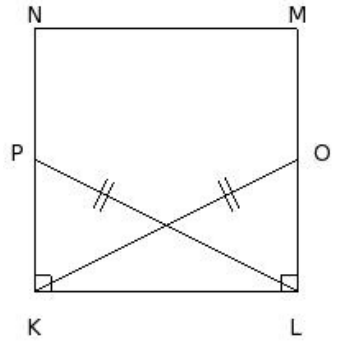
(i) SSS Congruency (ii) ASA Congruency (iii) not congruent (iv) RHS Congruency (v) SAS Congruency

24. With the data in the given figure, △BED ≅ △BCD by which property?



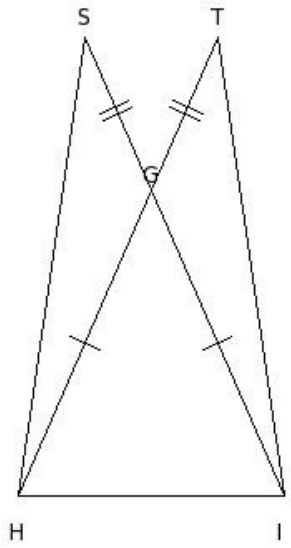
(i) not congruent (ii) SAS Congruency (iii) RHS Congruency (iv) SSS Congruency (v) ASA Congruency

25. With the data in the given figure, △PKL ≅ △OLK by which property?



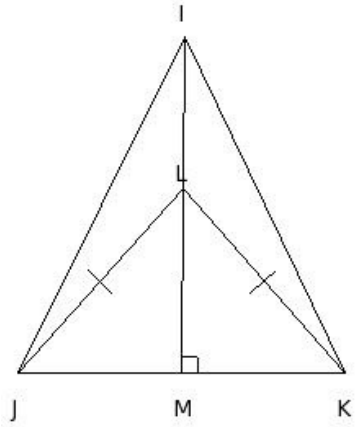
(i) SAS Congruency (ii) not congruent (iii) SSS Congruency (iv) RHS Congruency (v) ASA Congruency

26. With the data in the given figure, △SHI ≅ △TIH by which property?



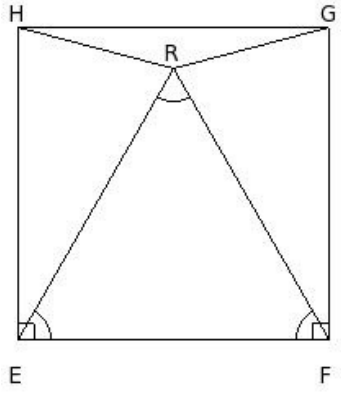
(i) ASA Congruency (ii) SAS Congruency (iii) not congruent (iv) SSS Congruency (v) RHS Congruency

27. In the given figure, △LJK is an isosceles triangle. IM ⊥ JK passing through L. △ILJ ≅ △ILK by which property?



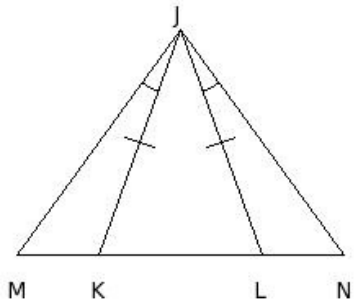
(i) SSS Congruency (ii) ASA Congruency (iii) not congruent (iv) SAS Congruency (v) RHS Congruency

28. In the given figure, EFGH is a square and △REF is an equilateral triangle. △RHE ≅ △RGF by which property?



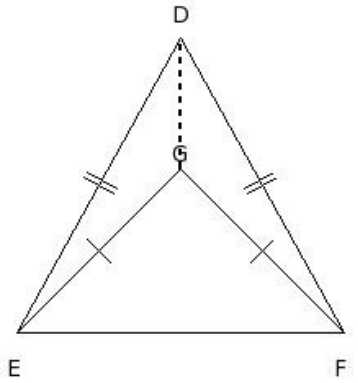
(i) SSS Congruency (ii) ASA Congruency (iii) RHS Congruency (iv) not congruent (v) SAS Congruency

29. With the data in the given figure, △JKM ≅ △JLN by which property?



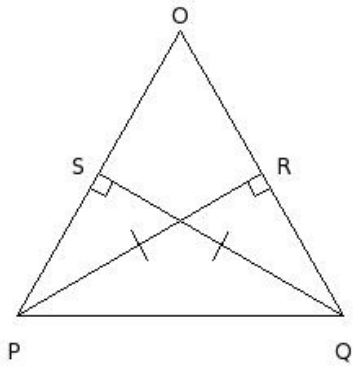
(i) SAS Congruency (ii) not congruent (iii) SSS Congruency (iv) ASA Congruency (v) RHS Congruency

30. With the data in the given figure, △DGE ≅ △DGF by which property?



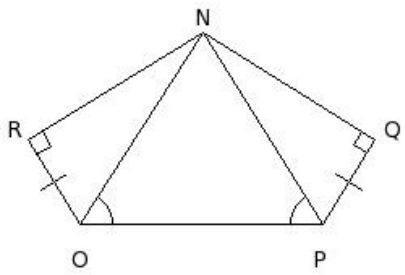
(i) SAS Congruency (ii) ASA Congruency (iii) SSS Congruency (iv) not congruent (v) RHS Congruency

31. With the data in the given figure, △PRQ ≅ △QSP by which property?



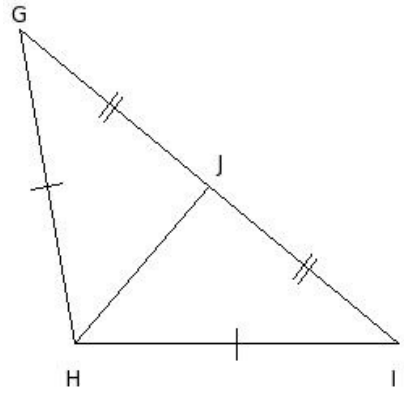
(i) SAS Congruency (ii) SSS Congruency (iii) ASA Congruency (iv) RHS Congruency (v) not congruent

32. With the data in the given figure, △NOR ≅ △NPQ by which property?



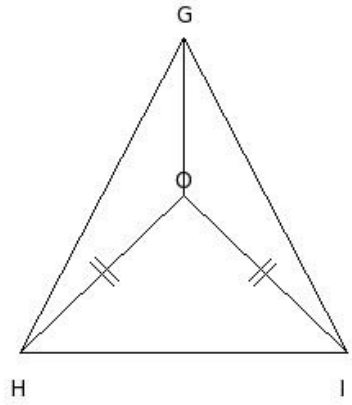
(i) SSS Congruency (ii) ASA Congruency (iii) SAS Congruency (iv) not congruent (v) RHS Congruency

33. In the given figure, △GHI is an obtuse angled triangle. △GHJ ≅ △IHJ by which property?



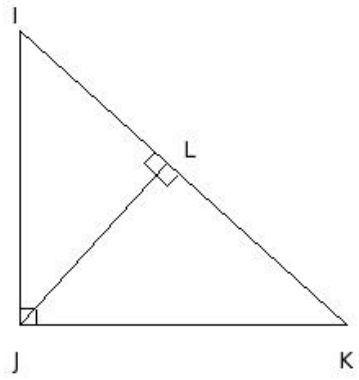
(i) not congruent (ii) ASA Congruency (iii) SAS Congruency (iv) SSS Congruency (v) RHS Congruency

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



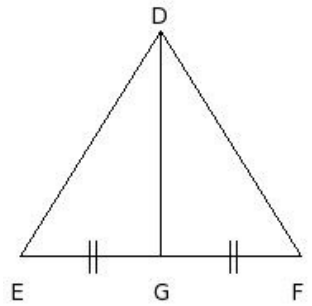
(i) SAS Congruency (ii) not congruent (iii) RHS Congruency (iv) SSS Congruency (v) ASA Congruency

35. With the data in the figure, △ILJ ≅ △KLJ by which property?



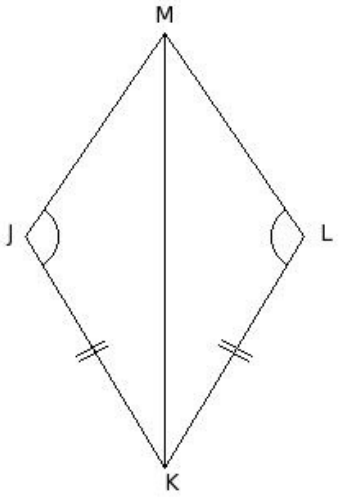
(i) not congruent (ii) SAS Congruency (iii) RHS Congruency (iv) SSS Congruency (v) ASA Congruency

36. With the data in the figure, △DGE ≅ △DGF by which property?



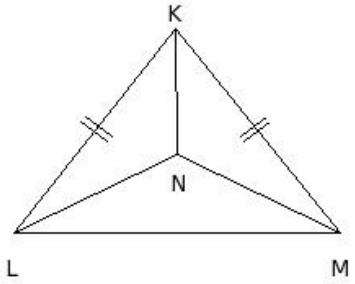
(i) RHS Congruency (ii) SAS Congruency (iii) ASA Congruency (iv) not congruent (v) SSS Congruency

37. With the data in the figure, △JMK ≅ △LMK by which property?



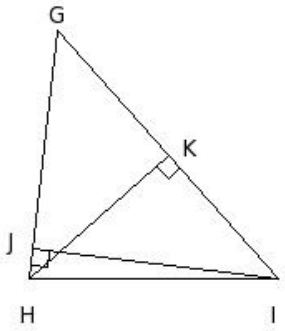
(i) RHS Congruency (ii) SAS Congruency (iii) ASA Congruency (iv) SSS Congruency (v) not congruent

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



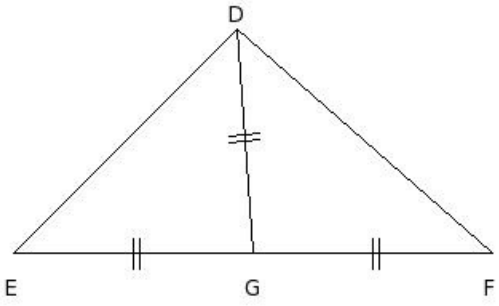
(i) not congruent (ii) ASA Congruency (iii) SAS Congruency (iv) SSS Congruency (v) RHS Congruency

39. With the data in the figure, △HKI ≅ △IJH by which property?



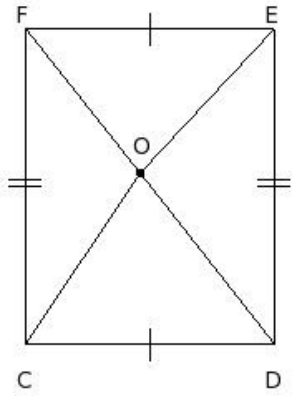
(i) RHS Congruency (ii) not congruent (iii) SSS Congruency (iv) ASA Congruency (v) SAS Congruency

40. With the data in the figure, △DGE ≅ △DGF by which property?



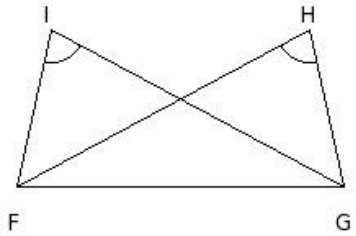
(i) SSS Congruency (ii) RHS Congruency (iii) not congruent (iv) ASA Congruency (v) SAS Congruency

41. With the data in the figure, △COD ≅ △FOE by which property?



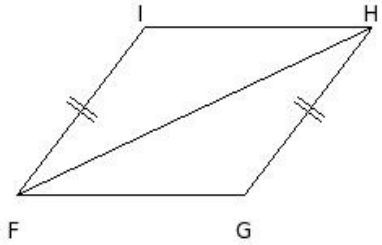
(i) SAS Congruency (ii) SSS Congruency (iii) RHS Congruency (iv) ASA Congruency (v) not congruent

42. With the data in the figure, △FGI ≅ △GFH by which property?



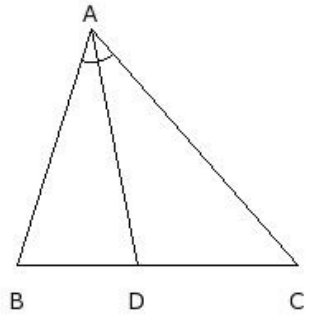
(i) ASA Congruency (ii) not congruent (iii) RHS Congruency (iv) SAS Congruency (v) SSS Congruency

43. With the data in the figure, △FHI ≅ △HFG by which property?



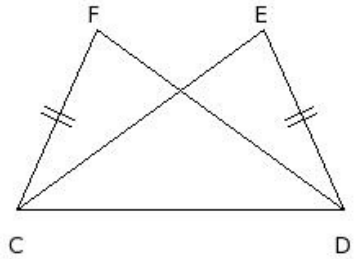
(i) SSS Congruency (ii) RHS Congruency (iii) ASA Congruency (iv) not congruent (v) SAS Congruency

44. With the data in the figure, △ADB ≅ △ADC by which property?



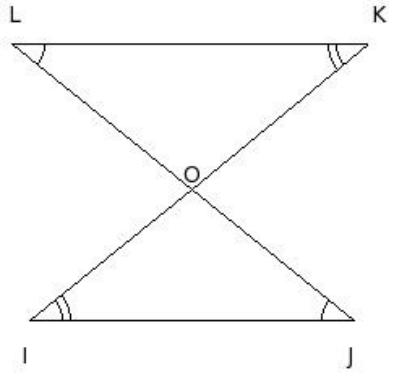
(i) RHS Congruency (ii) SSS Congruency (iii) not congruent (iv) ASA Congruency (v) SAS Congruency

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



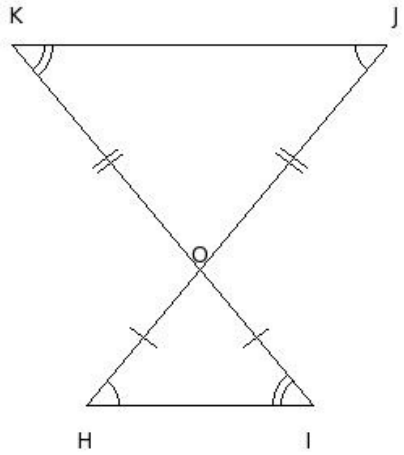
(i) SSS Congruency (ii) ASA Congruency (iii) RHS Congruency (iv) SAS Congruency (v) not congruent

46. With the data in the figure, △IOJ ≅ △KOL by which property?



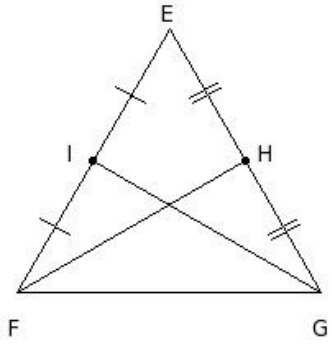
(i) SAS Congruency (ii) ASA Congruency (iii) RHS Congruency (iv) not congruent (v) SSS Congruency

47. With the data in the figure, △HOI ≅ △JOK by which property?



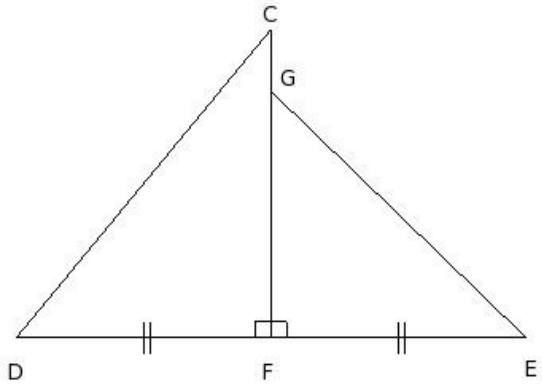
(i) SAS Congruency (ii) ASA Congruency (iii) SSS Congruency (iv) not congruent (v) RHS Congruency

48. With the data in the figure, △FGI ≅ △GFH by which property?



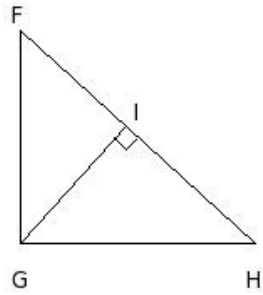
(i) RHS Congruency (ii) SSS Congruency (iii) ASA Congruency (iv) SAS Congruency (v) not congruent

49. With the data in the figure, △CDF ≅ △GEF by which property?



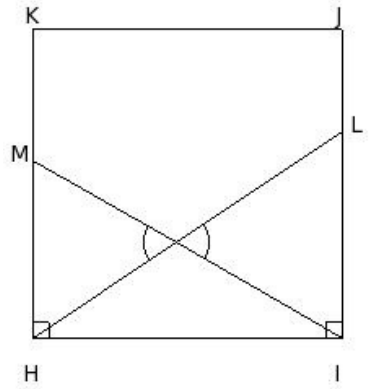
(i) ASA Congruency (ii) SAS Congruency (iii) not congruent (iv) RHS Congruency (v) SSS Congruency

50. With the data in the figure, △FGI ≅ △HGI by which property?



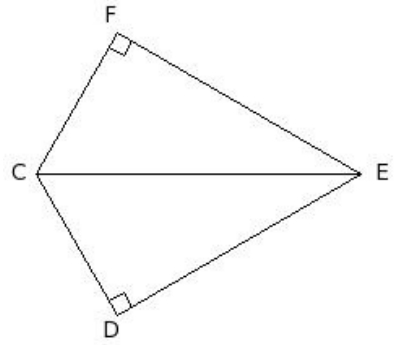
(i) not congruent (ii) ASA Congruency (iii) SAS Congruency (iv) SSS Congruency (v) RHS Congruency

51. With the data in the figure, △HIL ≅ △IHM by which property?



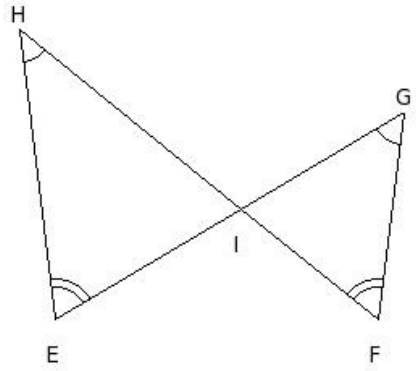
(i) SSS Congruency (ii) ASA Congruency (iii) not congruent (iv) SAS Congruency (v) RHS Congruency

52. With the data in the figure, △CEF ≅ △CED by which property?



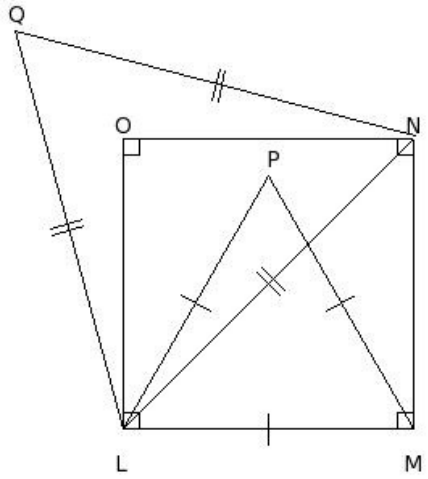
(i) SSS Congruency (ii) ASA Congruency (iii) RHS Congruency (iv) SAS Congruency (v) not congruent

53. With the data in the figure, △EIH ≅ △FIG by which property?



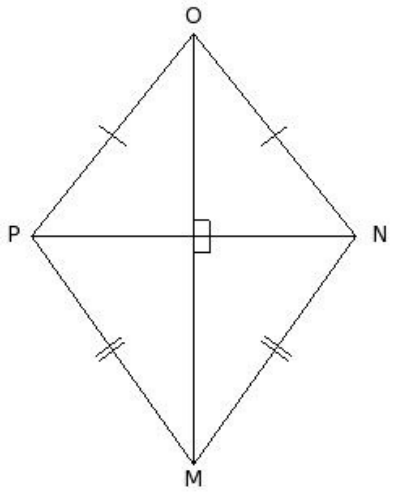
(i) SAS Congruency (ii) SSS Congruency (iii) RHS Congruency (iv) not congruent (v) ASA Congruency

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



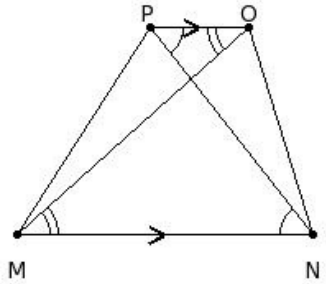
(i) RHS Congruency (ii) SSS Congruency (iii) not congruent (iv) SAS Congruency (v) ASA Congruency

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



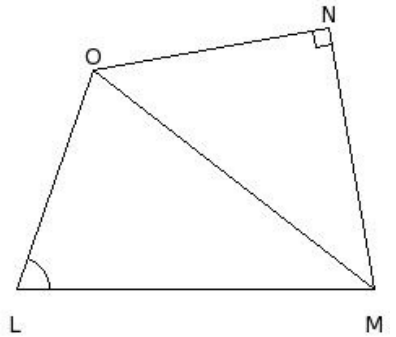
(i) RHS Congruency (ii) SAS Congruency (iii) ASA Congruency (iv) not congruent (v) SSS Congruency

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



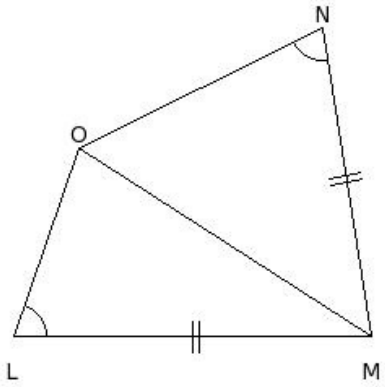
(i) SAS Congruency (ii) ASA Congruency (iii) RHS Congruency (iv) not congruent (v) SSS Congruency

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



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

58. With the data in the given figure, △LMO ≅ △NMO by which property?



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

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

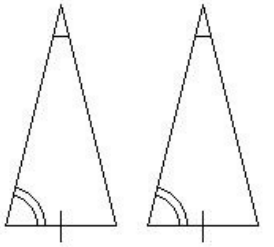


fig 3

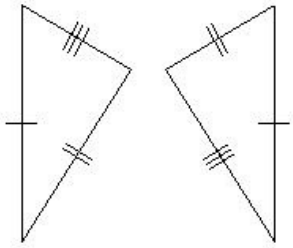


fig 4

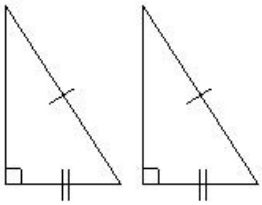


fig 1

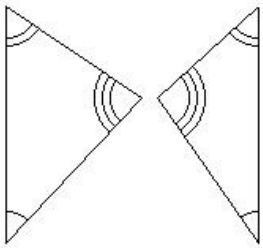


fig 2

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

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

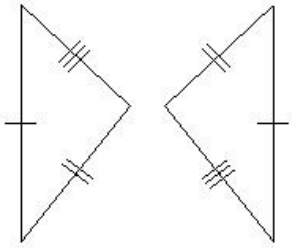


fig 3

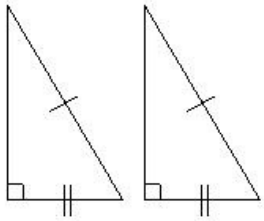


fig 4

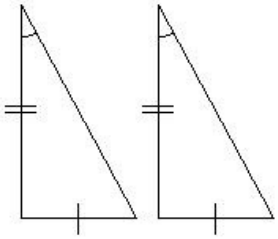


fig 1

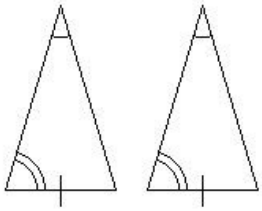


fig 2

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

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

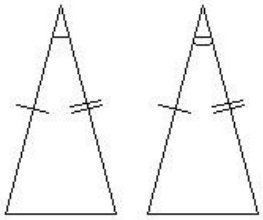


fig 3

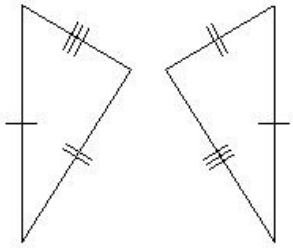


fig 4

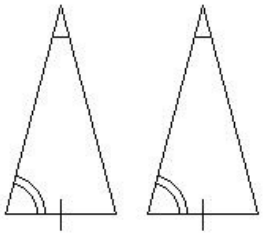


fig 1

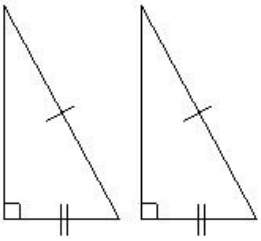


fig 2

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

Assignment Key

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