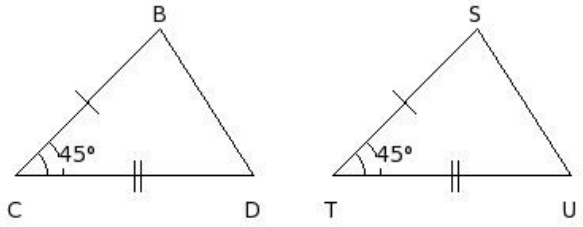
EduSahara™ Assignment

Name : Congruence of Triangles

Chapter : Triangles

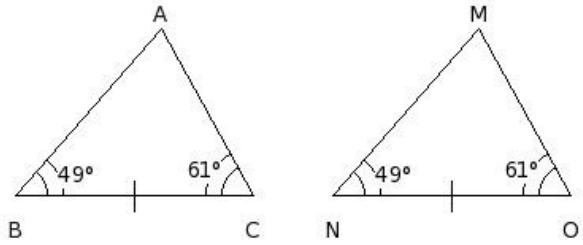
Grade : ICSE Grade IX

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



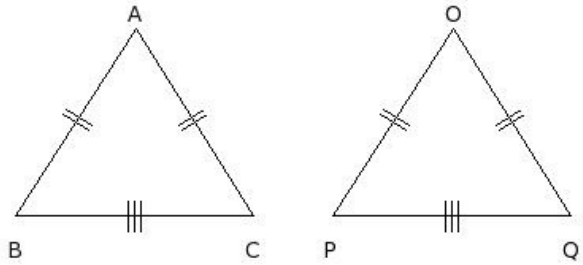
(i) SSS Congruency (ii) ASA Congruency (iii) SAS Congruency (iv) RHS Congruency

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



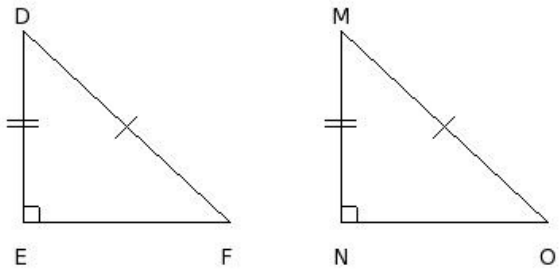
(i) ASA Congruency (ii) RHS Congruency (iii) SSS Congruency (iv) SAS Congruency

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



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

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



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

5. Which of the following are true?

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

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

6. Which of the following are true?

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

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

7. Which of the following are true?

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

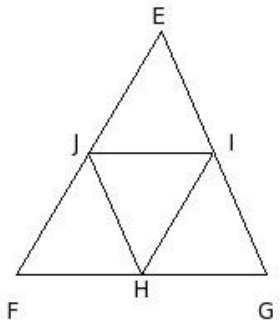
(i) {a,b,d} (ii) {c,a,b} (iii) {c,e,d} (iv) {e,b} (v) {c,a}

8. Which of the following are true?

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

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

9. In the given figure, the area of the $\triangle$EFG is x sq.cm. H,I,J are the mid-points of the sides FG , GE and EF respectively. The area of the $\triangle$HIJ is



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

(v) $\frac{3}{4}$ of area of $\triangle$EFG

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

(i) EF : CD (ii) DE : CF (iii) CF : DE (iv) CE : DF (v) CD : EF

11. 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?

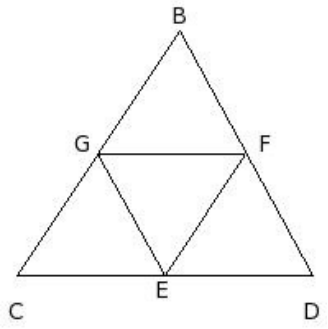
a) Area of △BCD = 4 times area of △EFG

b) Area of trapezium CDFG is thrice the area of △BGF

c) All four small triangles have equal areas

d) $\text{Area of} \triangle BCD = \frac{1}{3} \text{ area of} \triangle EFG$

e) $\text{Area of trapezium } CDFG \text{ is } \frac{1}{4} \text{ the area of} \triangle BCD$



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

12. 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?

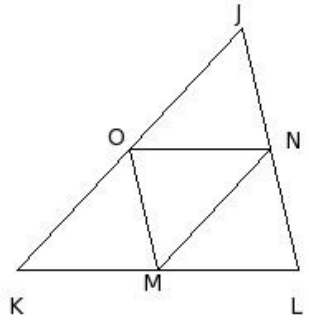
a) △JON ≅ △MNO

b) △OKM ≅ △JON

c) △JON ≅ △MON

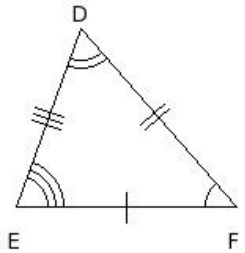
d) △OKM ≅ △MNO

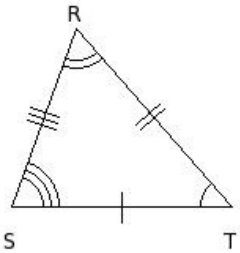
e) △JON ≅ △NML



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

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

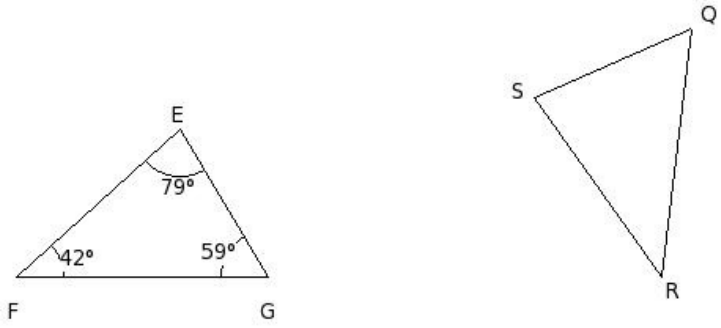




(i) △DEF ≅ △TSR (ii) △DEF ≅ △STR (iii) △DEF ≅ △TRS (iv) △EFD ≅ △RST (v) △DEF ≅ △RST

14. In the given figure, △EFG ≅ △SRQ. Which of the following are true?

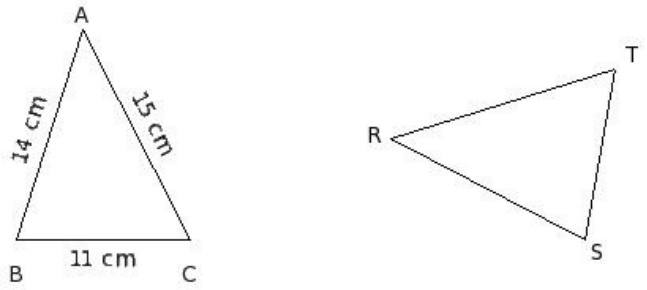
a) ∠S = 79°
b) ∠R = 59°
c) ∠Q = 59°
d) ∠R = 42°
e) ∠Q = 79°
f) ∠S = 42°



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

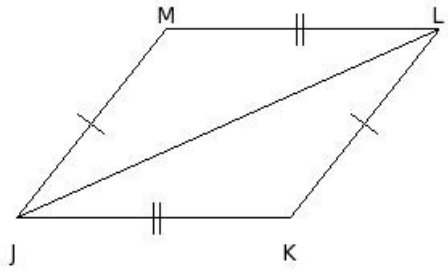
15. In the given figure, △ABC ≅ △RST. Which of the following are true?

a) TR = 14 cm
b) ST = 11 cm
c) RS = 11 cm
d) TR = 15 cm
e) ST = 14 cm
f) RS = 14 cm



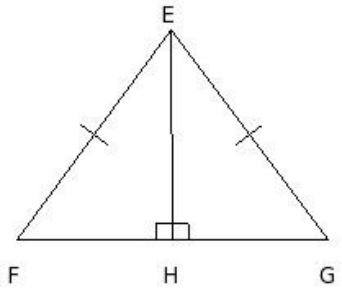
(i) {c,d} (ii) {e,a,f} (iii) {a,b} (iv) {b,d,f} (v) {c,b,d}

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



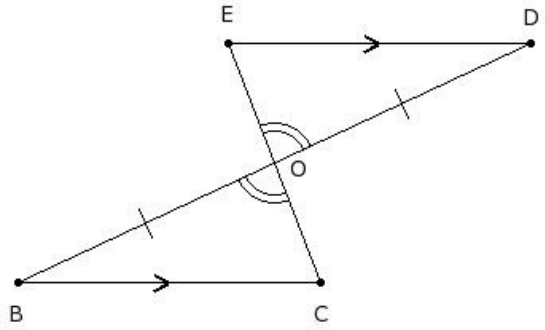
(i) △JML ≅ △JKL (ii) △JML ≅ △KLJ (iii) △JLM ≅ △JKL (iv) △JLM ≅ △JLK (v) △JLM ≅ △LJK

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



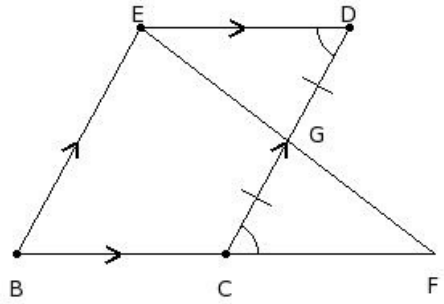
(i) ASA Congruency (ii) not congruent (iii) SAS Congruency (iv) RHS Congruency (v) SSS Congruency

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



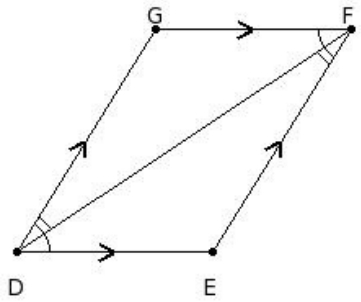
(i) not congruent (ii) SSS Congruency (iii) SAS Congruency (iv) RHS Congruency (v) ASA Congruency

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



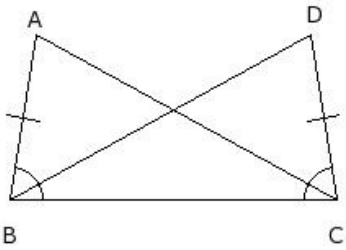
(i) SAS Congruency (ii) not congruent (iii) SSS Congruency (iv) RHS Congruency (v) ASA Congruency

20. With the given data in the figure, △DEF ≅ △FGD by which property?



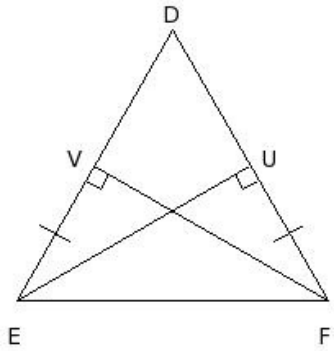
(i) RHS Congruency (ii) not congruent (iii) SAS Congruency (iv) SSS Congruency (v) ASA Congruency

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



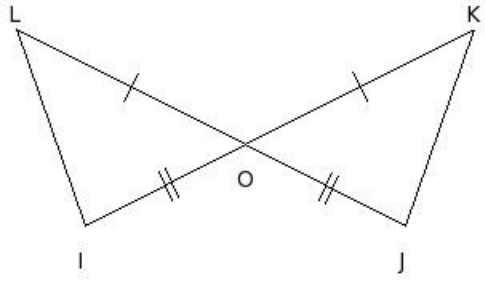
(i) not congruent (ii) SAS Congruency (iii) RHS Congruency (iv) SSS Congruency (v) ASA Congruency

22. With the given data in the figure, △VEF ≅ △UFE by which property?



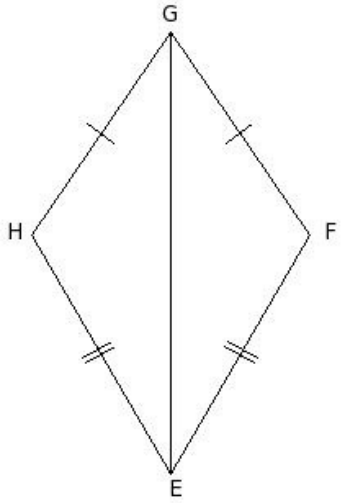
(i) ASA Congruency (ii) not congruent (iii) RHS Congruency (iv) SSS Congruency (v) SAS Congruency

23. With the data in the given figure, △ILO ≅ △JKO by which property?



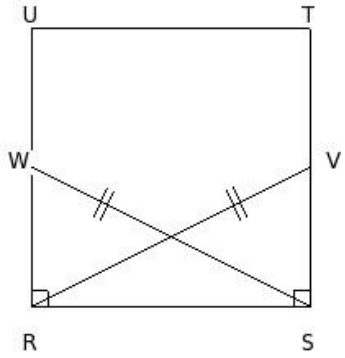
(i) not congruent (ii) SSS Congruency (iii) RHS Congruency (iv) SAS Congruency (v) ASA Congruency

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



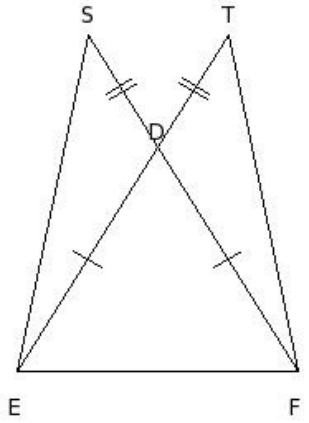
(i) not congruent (ii) RHS Congruency (iii) SSS Congruency (iv) ASA Congruency (v) SAS Congruency

25. With the data in the given figure, △WRS ≅ △VSR by which property?



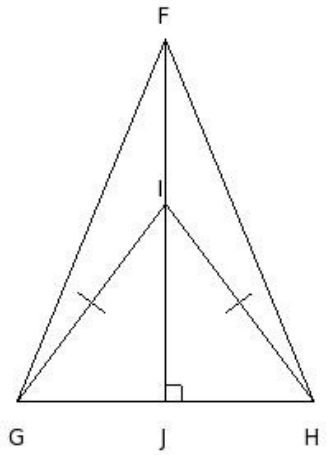
(i) RHS Congruency (ii) SSS Congruency (iii) ASA Congruency (iv) not congruent (v) SAS Congruency

26. With the data in the given figure, △SEF ≅ △TFE by which property?



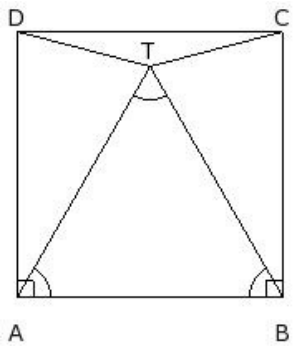
(i) RHS Congruency (ii) ASA Congruency (iii) SSS Congruency (iv) SAS Congruency (v) not congruent

27. In the given figure, △IGH is an isosceles triangle. FJ ⊥ GH passing through I. △FIG ≅ △FIH by which property?



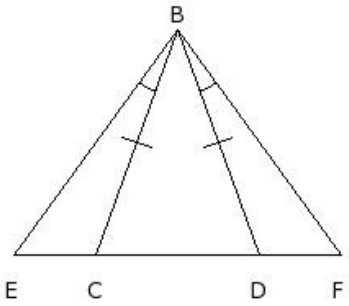
(i) SSS Congruency (ii) RHS Congruency (iii) ASA Congruency (iv) SAS Congruency (v) not congruent

28. In the given figure, ABCD is a square and △TAB is an equilateral triangle. △TDA ≅ △TCB by which property?



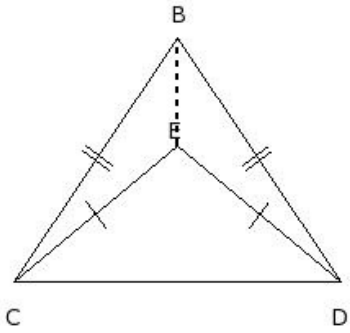
(i) SSS Congruency (ii) RHS Congruency (iii) ASA Congruency (iv) not congruent (v) SAS Congruency

29. With the data in the given figure, $\triangle BCE \cong \triangle BDF$ by which property?



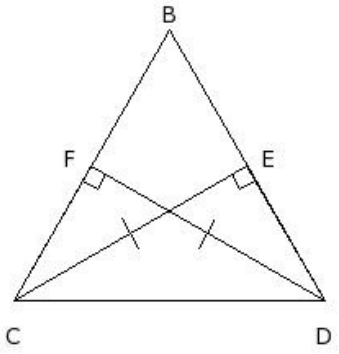
(i) SSS Congruency (ii) SAS Congruency (iii) RHS Congruency (iv) ASA Congruency (v) not congruent

30. With the data in the given figure, $\triangle BEC \cong \triangle BED$ by which property?



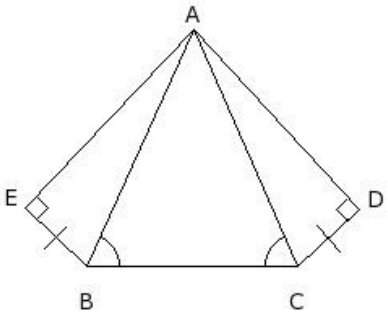
(i) SAS Congruency (ii) not congruent (iii) RHS Congruency (iv) ASA Congruency (v) SSS Congruency

31. With the data in the given figure, $\triangle CED \cong \triangle DFC$ by which property?



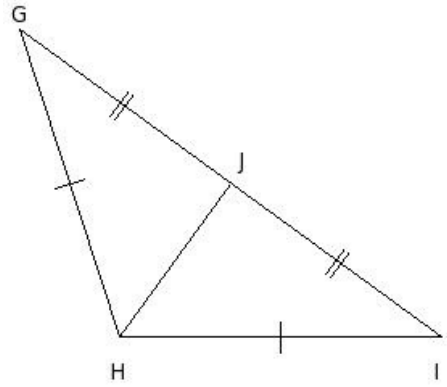
(i) ASA Congruency (ii) SAS Congruency (iii) not congruent (iv) RHS Congruency (v) SSS Congruency

32. With the data in the given figure, $\triangle ABE \cong \triangle ACD$ by which property?



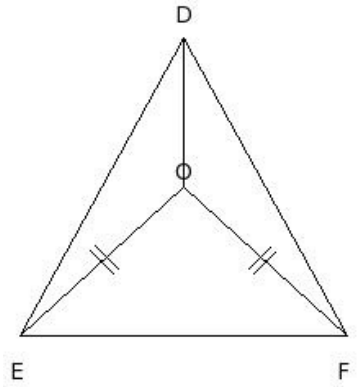
(i) RHS Congruency (ii) SSS Congruency (iii) ASA Congruency (iv) SAS Congruency (v) not congruent

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



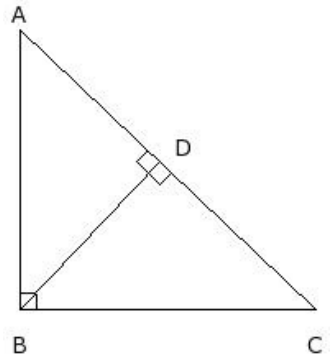
(i) not congruent (ii) SAS Congruency (iii) RHS Congruency (iv) ASA Congruency (v) SSS Congruency

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



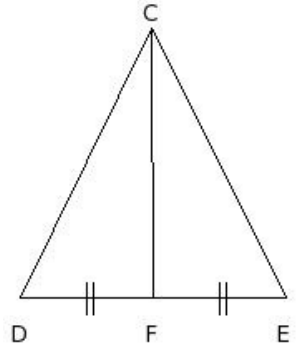
(i) SAS Congruency (ii) ASA Congruency (iii) not congruent (iv) SSS Congruency (v) RHS Congruency

35. With the data in the figure, △ADB ≅ △CDB by which property?



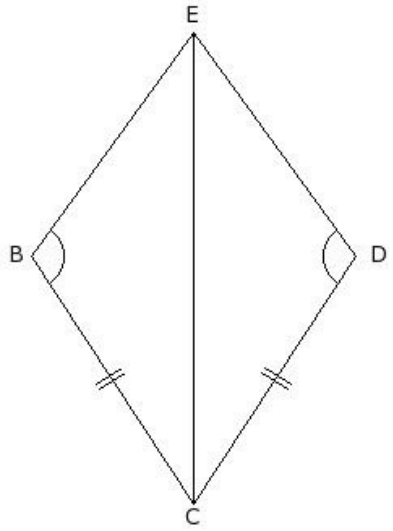
(i) SSS Congruency (ii) SAS Congruency (iii) ASA Congruency (iv) RHS Congruency (v) not congruent

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



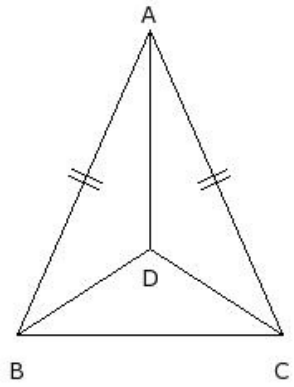
(i) ASA Congruency (ii) not congruent (iii) SSS Congruency (iv) RHS Congruency (v) SAS Congruency

37. With the data in the figure, △BEC ≅ △DEC by which property?



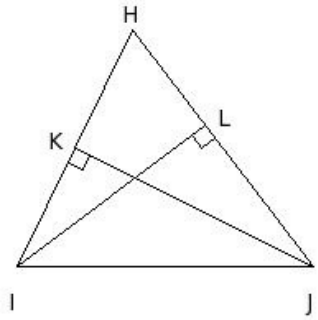
(i) RHS Congruency (ii) SSS Congruency (iii) ASA Congruency (iv) SAS Congruency (v) not congruent

38. With the data in the figure, △ABD ≅ △ACD by which property?



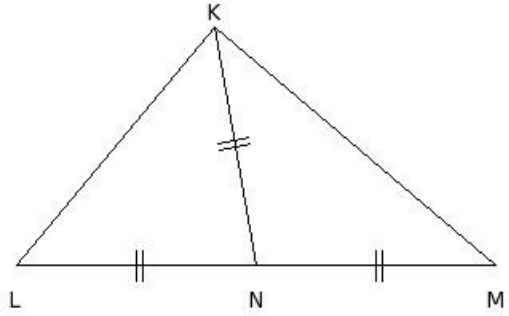
(i) ASA Congruency (ii) SSS Congruency (iii) not congruent (iv) SAS Congruency (v) RHS Congruency

39. With the data in the figure, △ILJ ≅ △JKI by which property?



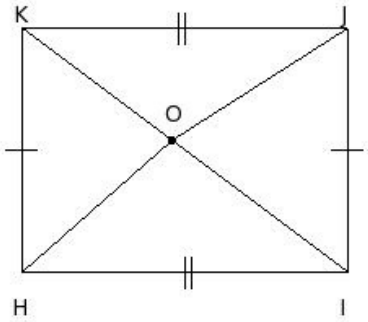
(i) RHS Congruency (ii) not congruent (iii) SSS Congruency (iv) ASA Congruency (v) SAS Congruency

40. With the data in the figure, △KNL ≅ △KNM by which property?



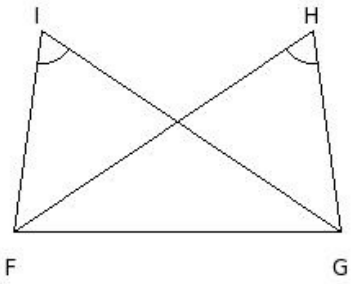
(i) ASA Congruency (ii) not congruent (iii) SAS Congruency (iv) SSS Congruency (v) RHS Congruency

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



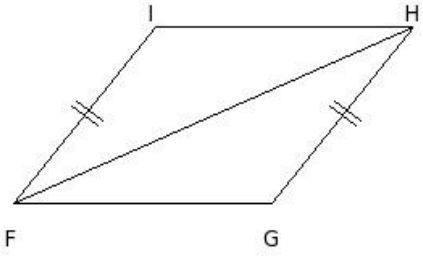
(i) SSS Congruency (ii) RHS Congruency (iii) not congruent (iv) ASA Congruency (v) SAS Congruency

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



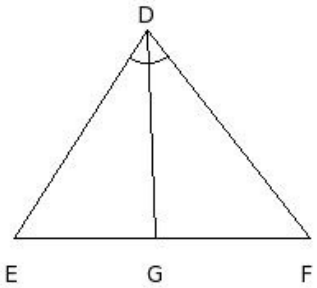
(i) SSS Congruency (ii) ASA Congruency (iii) not congruent (iv) SAS Congruency (v) RHS Congruency

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



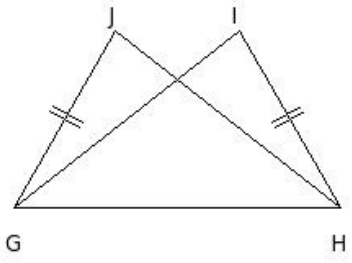
(i) not congruent (ii) SSS Congruency (iii) RHS Congruency (iv) SAS Congruency (v) ASA Congruency

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



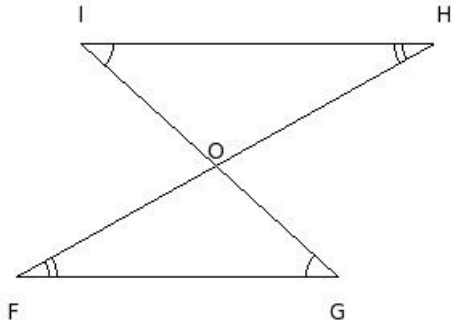
(i) SAS Congruency (ii) ASA Congruency (iii) SSS Congruency (iv) RHS Congruency (v) not congruent

45. With the data in the figure, △GJH ≅ △HIG by which property?



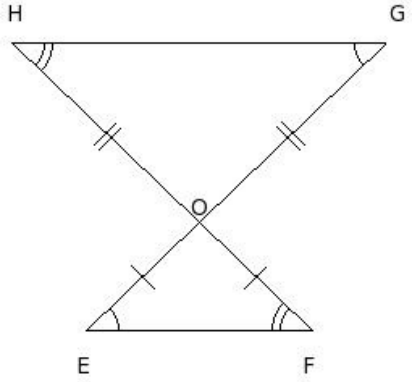
(i) SSS Congruency (ii) RHS Congruency (iii) ASA Congruency (iv) not congruent (v) SAS Congruency

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



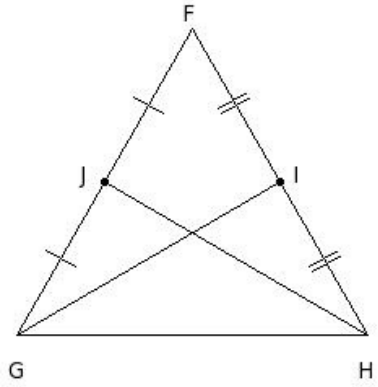
(i) ASA Congruency (ii) SAS Congruency (iii) RHS Congruency (iv) not congruent (v) SSS Congruency

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



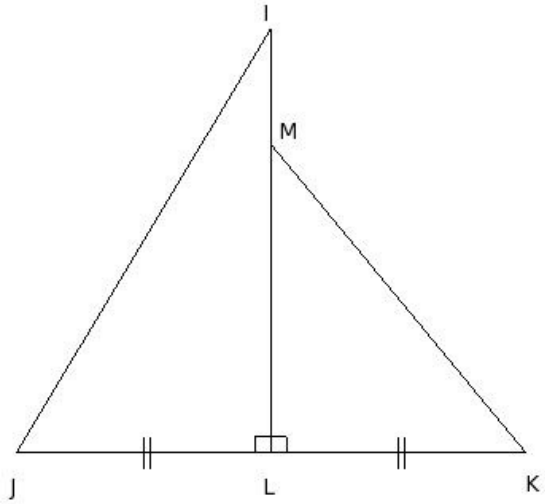
(i) ASA Congruency (ii) SAS Congruency (iii) SSS Congruency (iv) RHS Congruency (v) not congruent

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



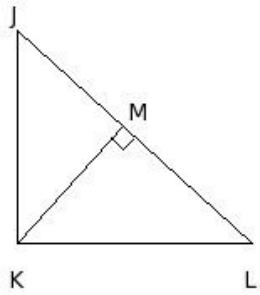
(i) SSS Congruency (ii) RHS Congruency (iii) SAS Congruency (iv) ASA Congruency (v) not congruent

49. With the data in the figure, △IJL ≅ △MKL by which property?



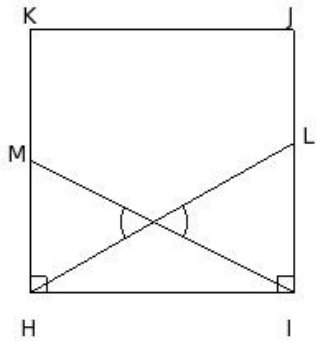
(i) RHS Congruency (ii) SSS Congruency (iii) ASA Congruency (iv) SAS Congruency (v) not congruent

50. With the data in the figure, △JKM ≅ △LKM by which property?



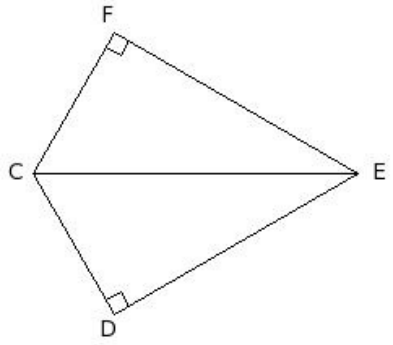
(i) not congruent (ii) RHS Congruency (iii) ASA Congruency (iv) SSS Congruency (v) SAS Congruency

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



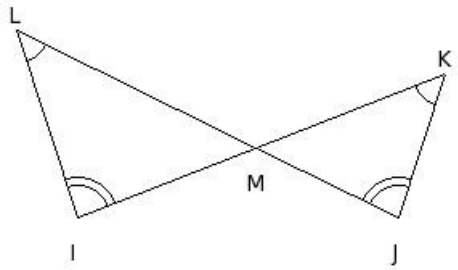
(i) not congruent (ii) SSS Congruency (iii) ASA Congruency (iv) RHS Congruency (v) SAS Congruency

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



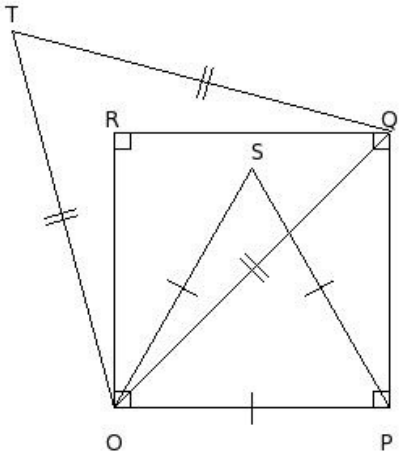
(i) SAS Congruency (ii) ASA Congruency (iii) RHS Congruency (iv) SSS Congruency (v) not congruent

53. With the data in the figure, △IML ≅ △JMK by which property?



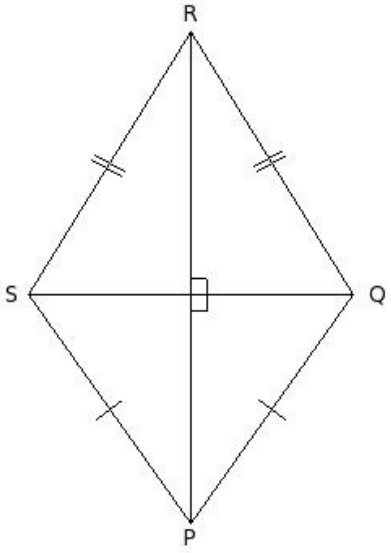
(i) RHS Congruency (ii) ASA Congruency (iii) not congruent (iv) SAS Congruency (v) SSS Congruency

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



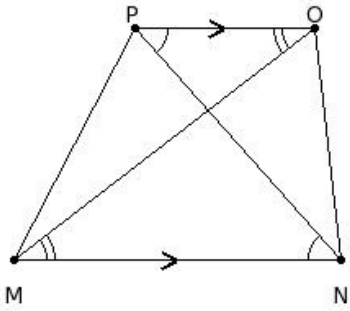
(i) RHS Congruency (ii) SAS Congruency (iii) not congruent (iv) ASA Congruency (v) SSS Congruency

55. With the data in the given figure, △PQS ≅ △RQS by which property?



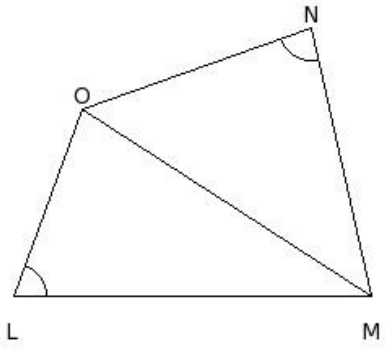
(i) RHS Congruency (ii) not congruent (iii) SAS Congruency (iv) ASA Congruency (v) SSS Congruency

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



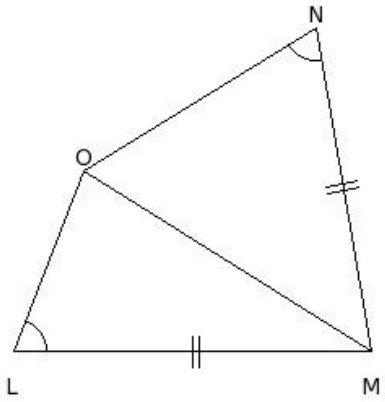
(i) SSS Congruency (ii) RHS Congruency (iii) not congruent (iv) ASA Congruency (v) SAS Congruency

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



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

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



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

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

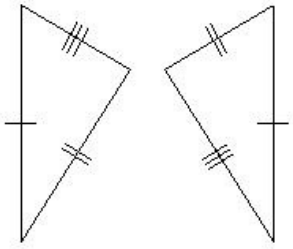


fig 3

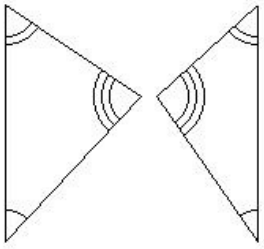


fig 4

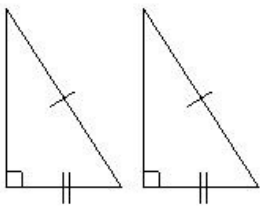


fig 1

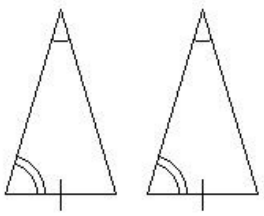


fig 2

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

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

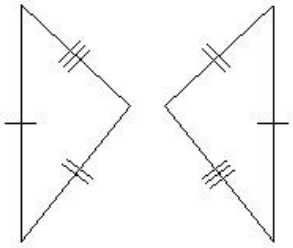


fig 3

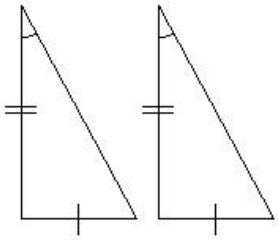


fig 4

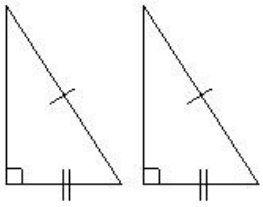


fig 1

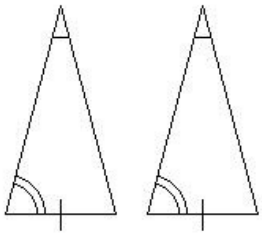


fig 2

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

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

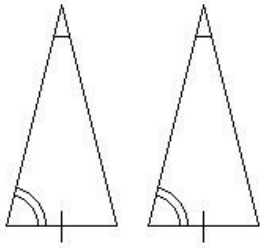


fig 3

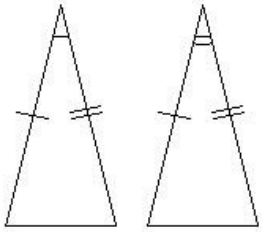


fig 4

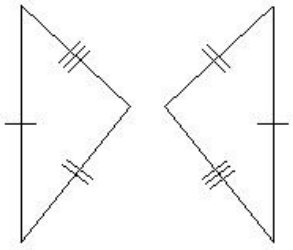


fig 1

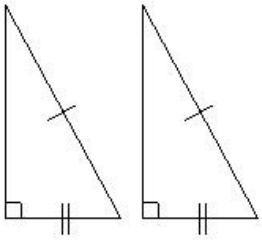


fig 2

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

Assignment Key

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