EduSahara™ Learning Center Assignment

Grade : Class IX, CBSE
Chapter : Triangles
Name : Congruence of Triangles

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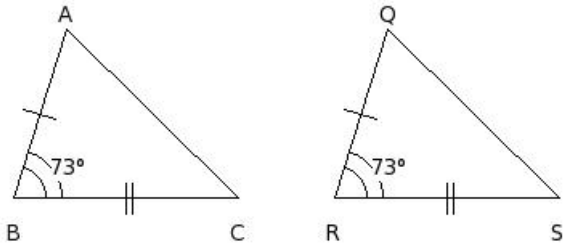
1. Identify the property by which the two given triangles are congruent



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

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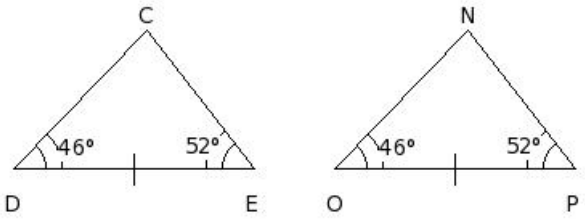
2. Identify the property by which the two given triangles are congruent



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

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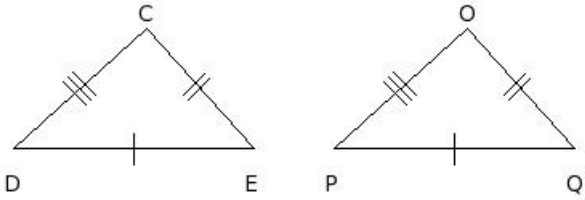
3. Identify the property by which the two given triangles are congruent



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

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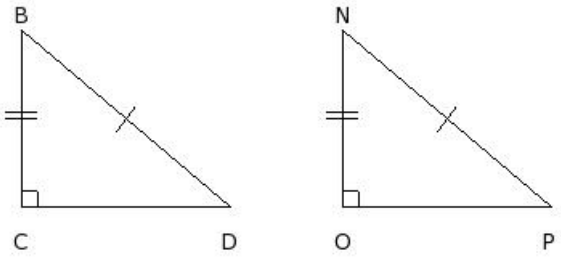
4. Identify the property by which the two given triangles are congruent



(i) SAS Congruency

(ii) SSS Congruency

(iii) RHS Congruency

(iv) ASA Congruency

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5. Which of the following are true ?

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

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

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6. Which of the following are true ?

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

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

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

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

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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) A polygonal region can be divided into a finite number of triangles in a unique way
d) 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

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

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9. In the given figure, points F , G and H are the mid-points of sides DE, EC and CD of $\triangle$CDE. Which of the following are true?

a) $\frac{1}{4}$

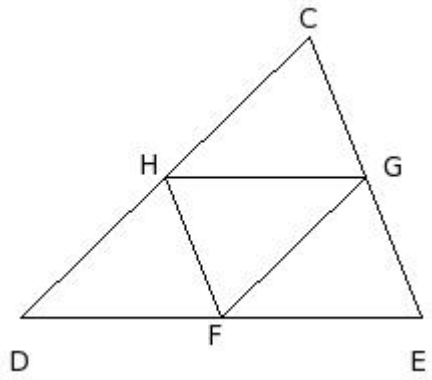
Area of trapezium DEGH is $\frac{4}{}$ the area of △CDE

b) Area of trapezium DEGH is thrice the area of △CHG

c) Area of △CDE = 4 times area of △FGH

d) All four small triangles have equal areas

e) Area of △CDE = $\frac{1}{3}$ area of △FGH



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

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10. In the given figure, points I , J and K are the mid-points of sides GH, HF and FG of △FGH. Which of the following are true?

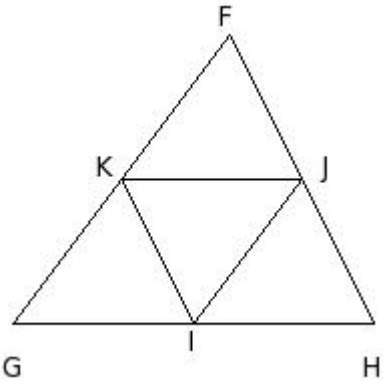
a) △FKJ ≅ △IKJ

b) △FKJ ≅ △JIH

c) △KGI ≅ △FKJ

d) △FKJ ≅ △IJK

e) △KGI ≅ △IJK



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

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

(i) △CDE ≅ △SQR

(ii) △CDE ≅ △SRQ

(iii) △CDE ≅ △RSQ

(iv) △CDE ≅ △QRS

(v) △DEC ≅ △QRS

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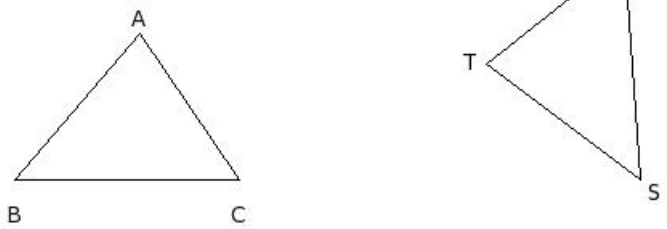
12. In the given figure, △ABC ≅ △TSR. Which of the following are true ?

a) ∠C = ∠R
b) BC = SR
c) ∠B = ∠S
d) ∠A = ∠R
e) BC = TS



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

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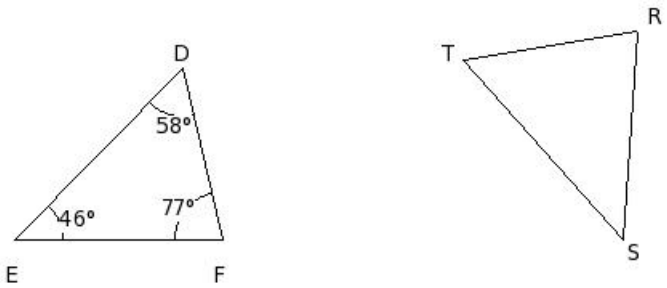
13. In the given figure, △DEF ≅ △TSR. Which of the following are true ?

a) ∠R = 77°
b) ∠S = 46°
c) ∠S = 77°
d) ∠R = 58°
e) ∠T = 46°
f) ∠T = 58°



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

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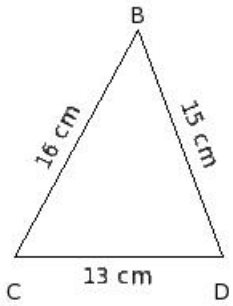
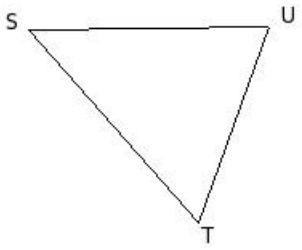
14. In the given figure, △BCD ≅ △STU. Which of the following are true ?

a) ST = 13 cm
b) US = 16 cm
c) US = 15 cm
d) ST = 16 cm
e) TU = 13 cm
f) TU = 16 cm





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

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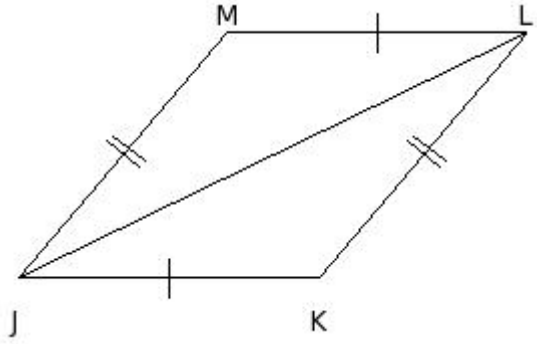
15. In the given figure, which of the following is true ?



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

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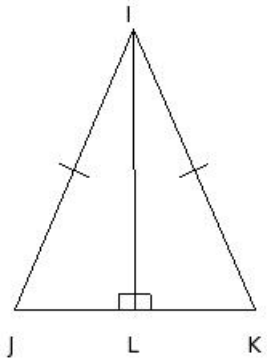
16. With the data in the given figure, △IJL ≅ △IKL by which property ?



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

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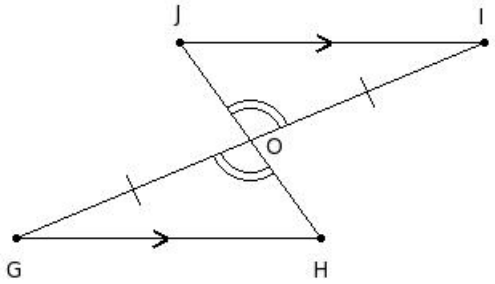
17. With the data in the given figure, △OJI ≅ △OHG by which property ?



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

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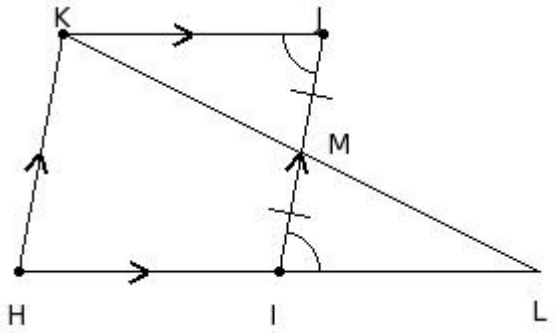
18. With the given data in the figure, △KJM ≅ △LIM by which property ?



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

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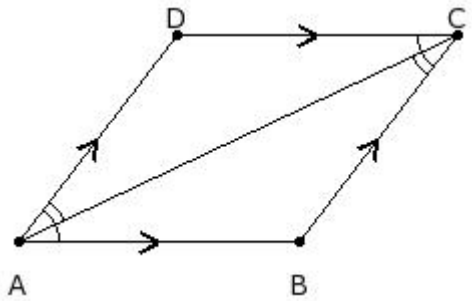
19. With the given data in the figure, △ABC ≅ △CDA by which property ?



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

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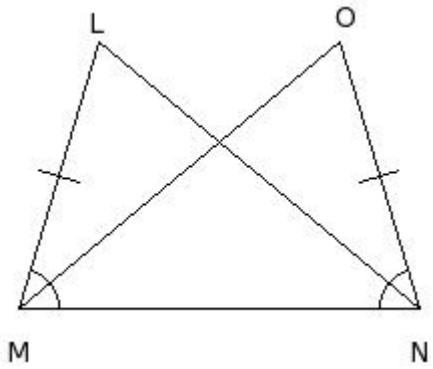
20. With the given data in the figure, △LMN ≅ △ONM by which property ?



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

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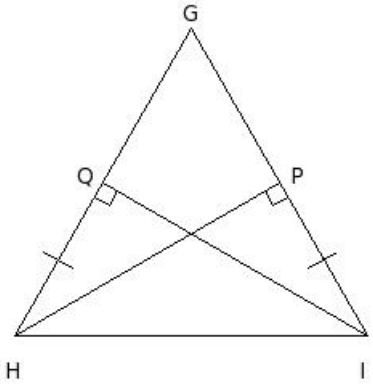
21. With the given data in the figure, △QHI ≅ △PIH by which property ?



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

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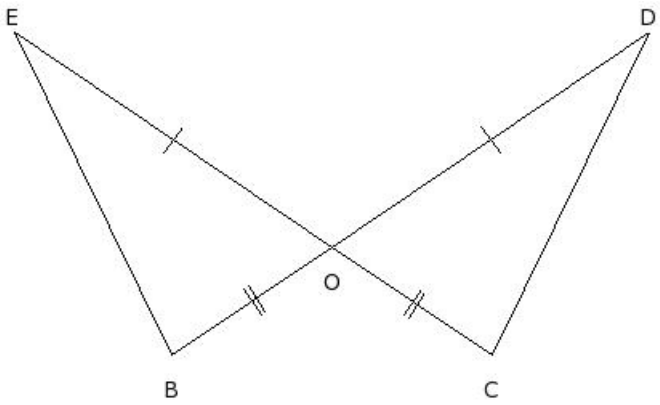
22. With the data in the given figure, △BEO ≅ △CDO by which property ?



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

(v) SSS Congruency

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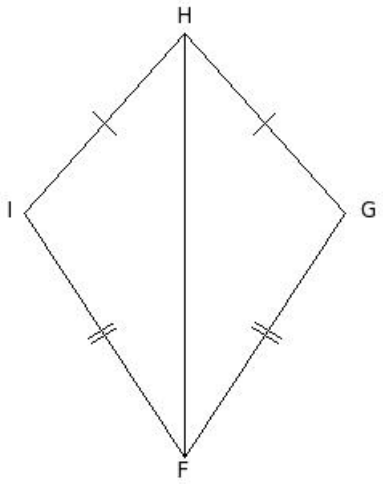
23. With the data in the given figure, △FIH ≅ △FGH by which property ?



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

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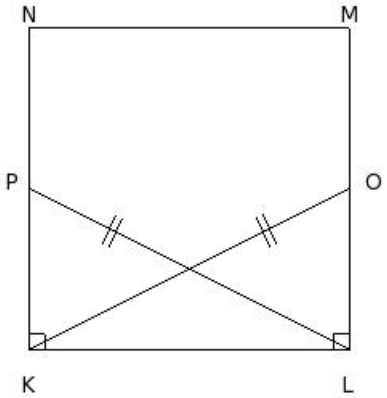
24. With the data in the given figure, △PKL ≅ △OLK by which property ?



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

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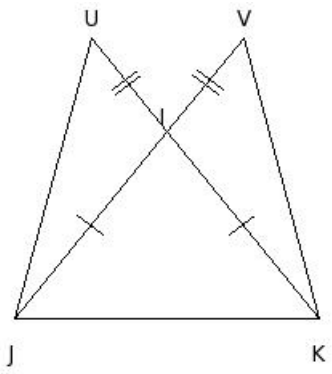
25. With the data in the given figure, △UJK ≅ △VKJ by which property ?



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

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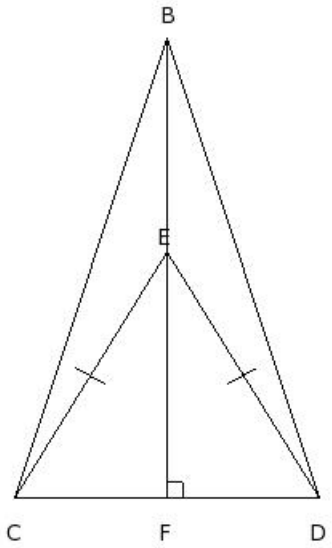
26. In the given figure, △ECD is an isosceles triangle. BF ⊥ CD passing through E. △BEC ≅ △BED by which property ?



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

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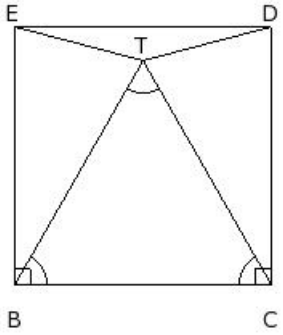
27. In the given figure, BCDE is a square and △TBC is an equilateral triangle. △TEB ≅ △TDC by which property ?



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

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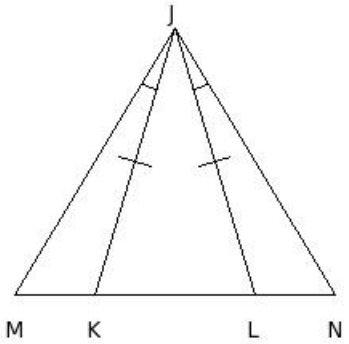
28. With the data in the given figure, △JKM ≅ △JLN by which property ?



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

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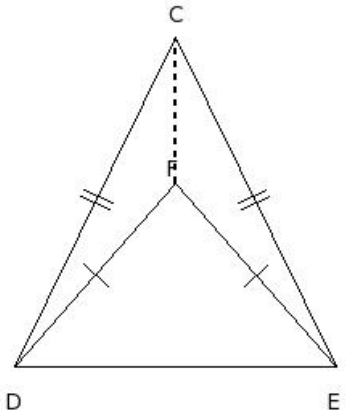
29. With the data in the given figure, △CFD ≅ △CFE by which property ?



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

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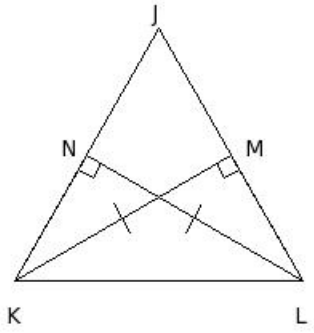
30. With the data in the given figure, △KML ≅ △LNK by which property ?



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

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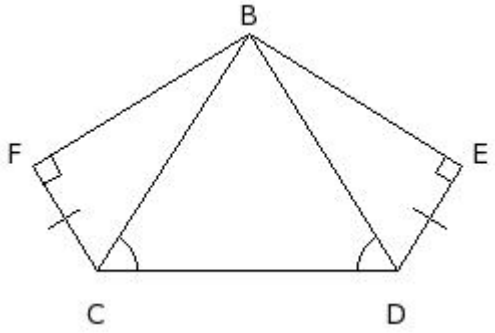
31. With the data in the given figure, △BCF ≅ △BDE by which property ?



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

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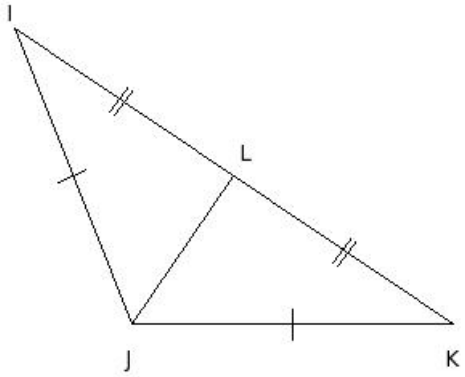
32. In the given figure, △IJK is an obtuse angled triangle. △IJL ≅ △KJL by which property ?



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

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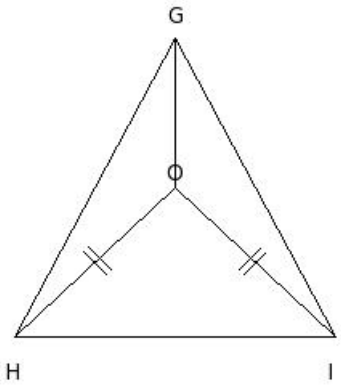
33. With the data in the given figure, △GOH ≅ △GOI by which property ?



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

(v) SSS Congruency

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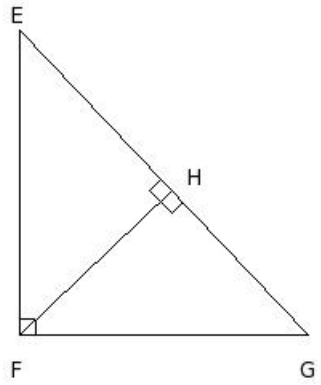
34. With the data in the figure, △EHF ≅ △GHF by which property ?



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

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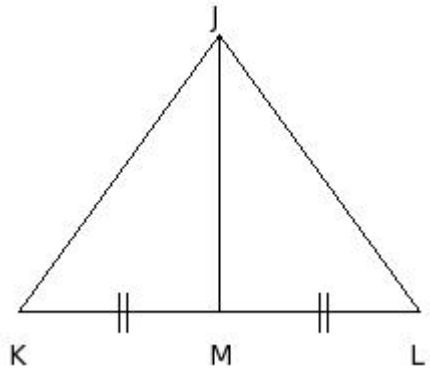
35. With the data in the figure, △JMK ≅ △JML by which property ?



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

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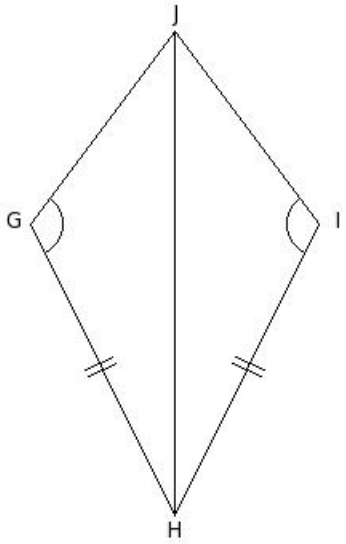
36. With the data in the figure, △GJH ≅ △IJH by which property ?



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

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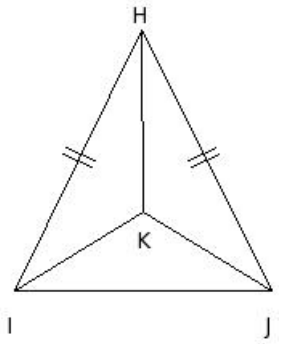
37. With the data in the figure, △HIK ≅ △HJK by which property ?



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

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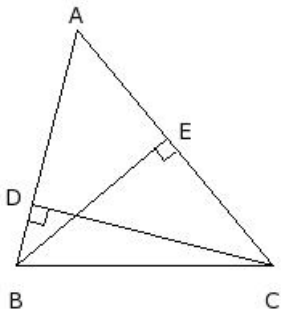
38. With the data in the figure, △BEC ≅ △CDB by which property ?



(i) not congruent
(ii) SSS Congruency
(iii) RHS Congruency

(iv) ASA Congruency

(v) SAS Congruency

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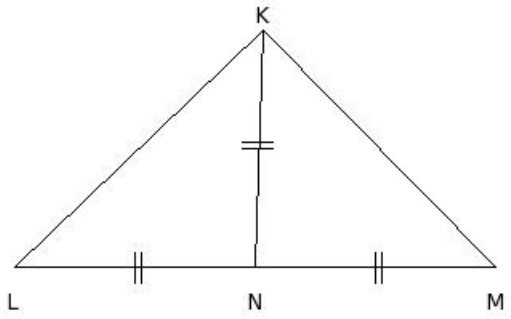
39. With the data in the figure, △KNL ≅ △KNM by which property ?



(i) SSS Congruency

(ii) RHS Congruency

(iii) ASA Congruency

(iv) not congruent

(v) SAS Congruency

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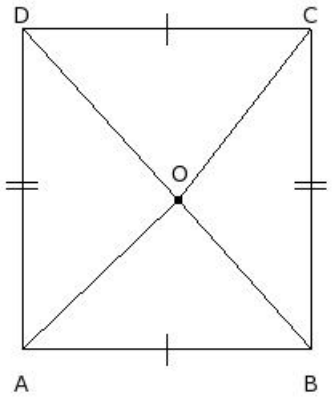
40. With the data in the figure, △AOB ≅ △DOC by which property ?



(i) SAS Congruency

(ii) not congruent

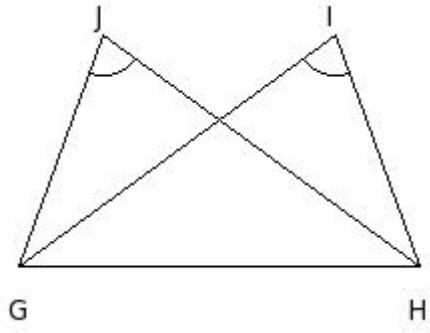
(iii) ASA Congruency

(iv) SSS Congruency

(v) RHS Congruency

---

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



(i) SAS Congruency

(ii) not congruent

(iii)

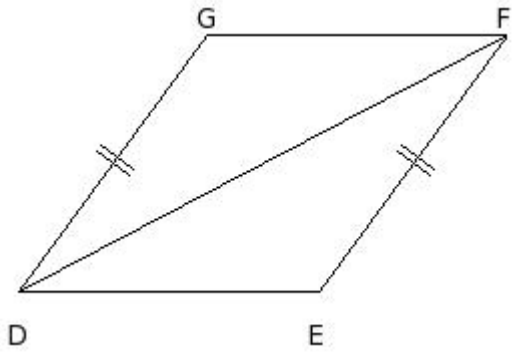
SSS Congruency

(iv) RHS Congruency

(v) ASA Congruency

---

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



(i) not congruent

(ii) RHS Congruency

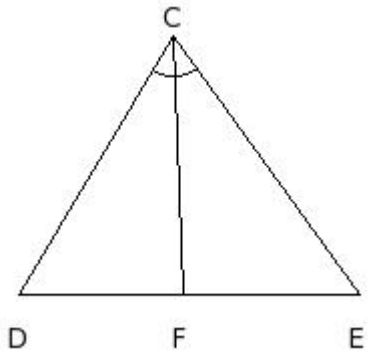
(iii) SAS Congruency

(iv) ASA Congruency

(v) SSS Congruency

---

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



(i) SAS Congruency

(ii) SSS Congruency

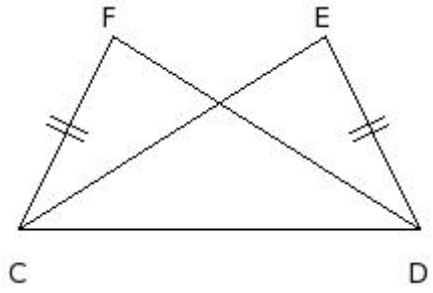
(iii) RHS Congruency

(iv) not congruent

(v) ASA Congruency

---

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



(i) not congruent

(ii) RHS Congruency

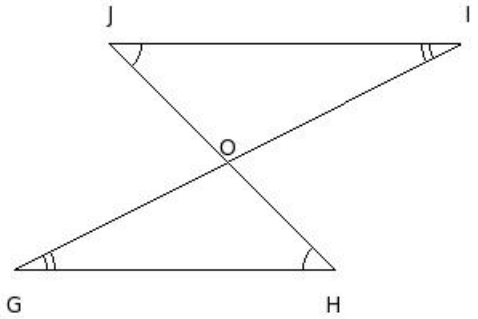
(iii) SAS Congruency

(iv) ASA Congruency

(v) SSS Congruency

---

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



(i) SSS Congruency

(ii) not congruent

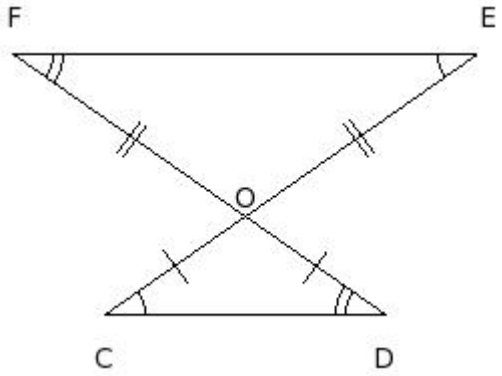
(iii) RHS Congruency

(iv) ASA Congruency

(v) SAS Congruency

---

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



(i) not congruent

(ii) ASA Congruency

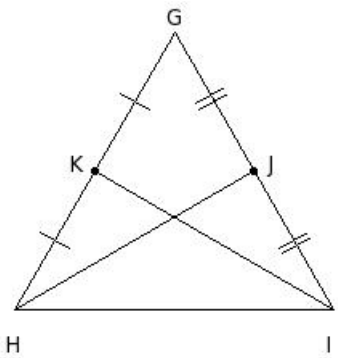
(iii) SSS Congruency

(iv) SAS Congruency

(v) RHS Congruency

---

47. With the data in the figure, △HIK ≅ △IHJ by which property ?



(i) SSS Congruency

(ii) RHS Congruency

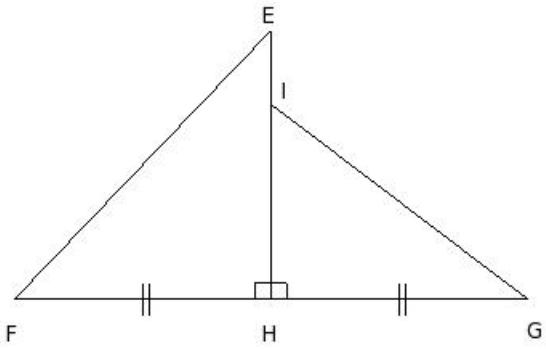
(iii) not congruent

(iv) ASA Congruency

(v) SAS Congruency

---

48. With the data in the figure, △EFH ≅ △IGH by which property ?



(i) not congruent

(ii) SSS Congruency

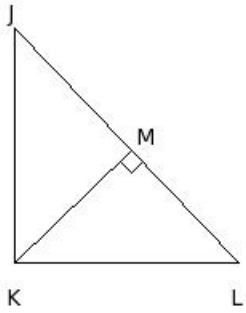
(iii) RHS Congruency

(iv) ASA Congruency

(v) SAS Congruency

---

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



(i) SAS Congruency

(ii) SSS Congruency

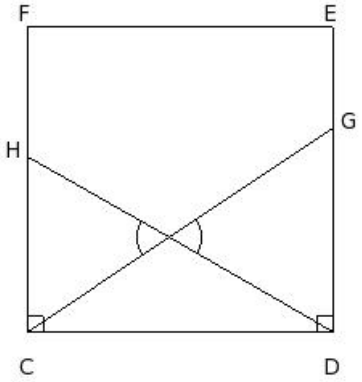
(iii) not congruent

(iv) RHS Congruency

(v) ASA Congruency

---

50. With the data in the figure, △CDG ≅ △DCH by which property ?



(i) SAS Congruency

(ii) ASA Congruency

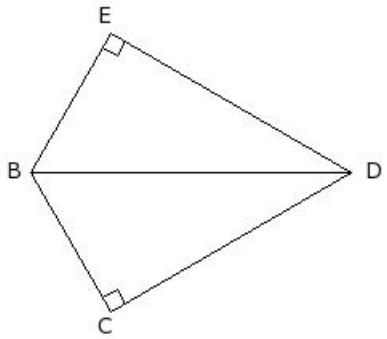
(iii) RHS Congruency

(iv) SSS Congruency

(v) not congruent

---

51. With the data in the figure, △BDE ≅ △BDC by which property ?



(i) SAS Congruency

(ii) SSS Congruency

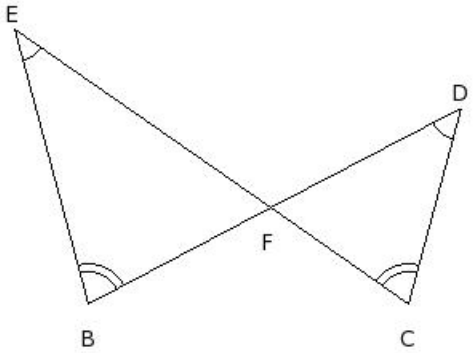
(iii) ASA Congruency

(iv) RHS Congruency

(v) not congruent

---

52. With the data in the figure, △BFE ≅ △CFD by which property ?



(i) RHS Congruency

(ii) SAS Congruency

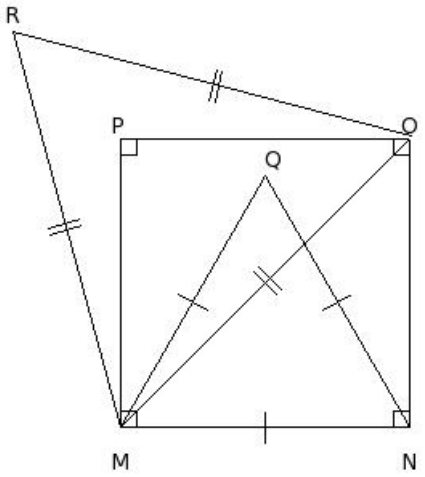
(iii) not congruent

(iv) SSS Congruency

(v) ASA Congruency

---

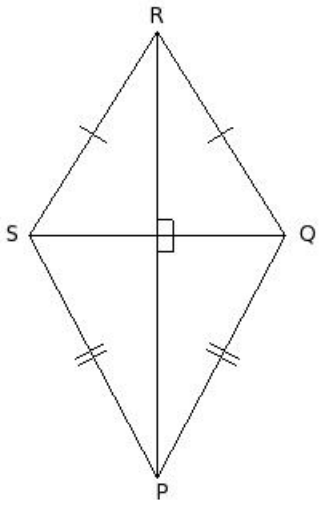
53. With the data in the figure, △MNQ ≅ △MOR by which property ?



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

---

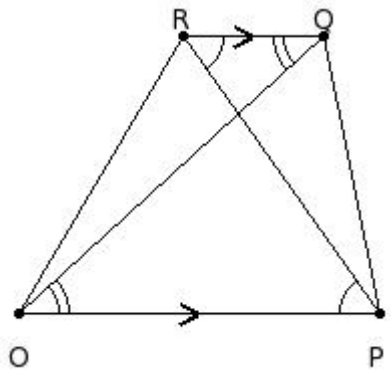
54. With the data in the given figure, △PQS ≅ △RQS by which property ?



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

---

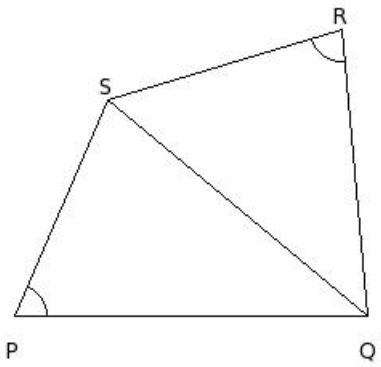
55. With the data in the given figure, △OPR ≅ △POQ by which property ?



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

---

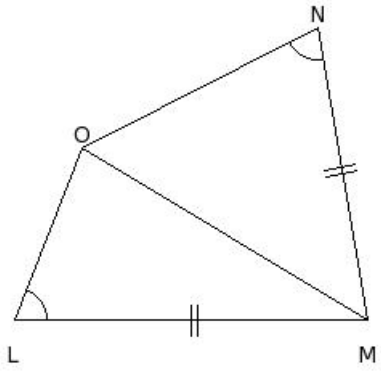
56. With the data in the given figure, △PQS ≅ △RSQ by which property ?



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

---

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



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

---

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

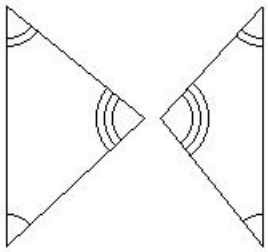


fig 3

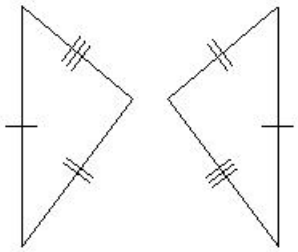


fig 4

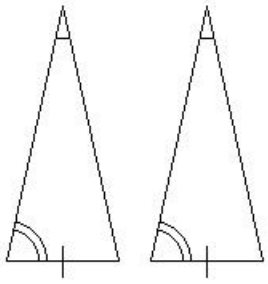


fig 1

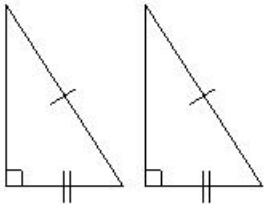


fig 2

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

---

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

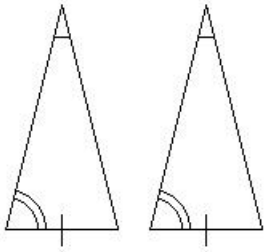


fig 3

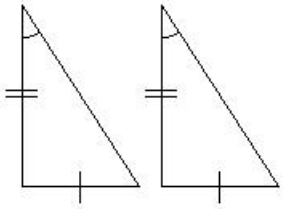


fig 4

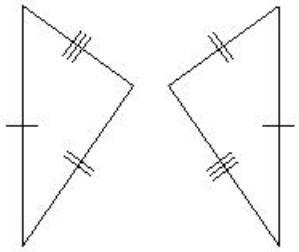


fig 1

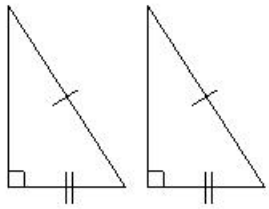


fig 2

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

---

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

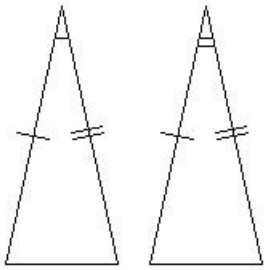


fig 3

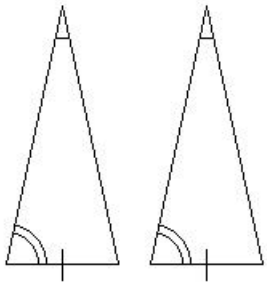


fig 4

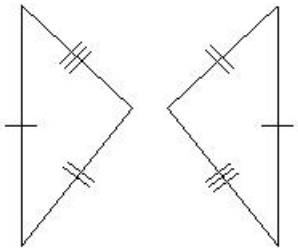


fig 1

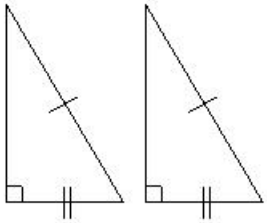


fig 2

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

Assignment Key

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

56) (iv)
57) (iii)
58) (iv)
59) (i)
60) (i)