EduSahara™ Learning Center Assignment

Grade : Class IX, ICSE
Chapter : Similarity
Name : Similarity of Triangles

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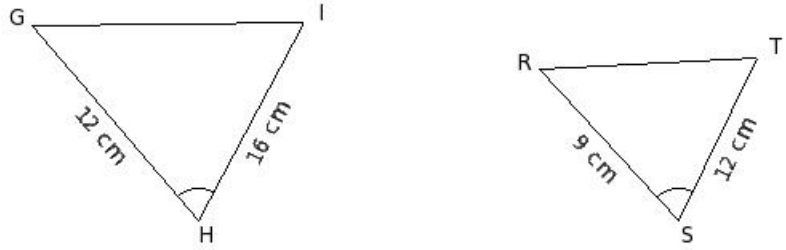
1. Identify the property by which the two given triangles are similar



(i) SSS Similarity
(ii) AAA Similarity
(iii) SAS Similarity
(iv) not similar

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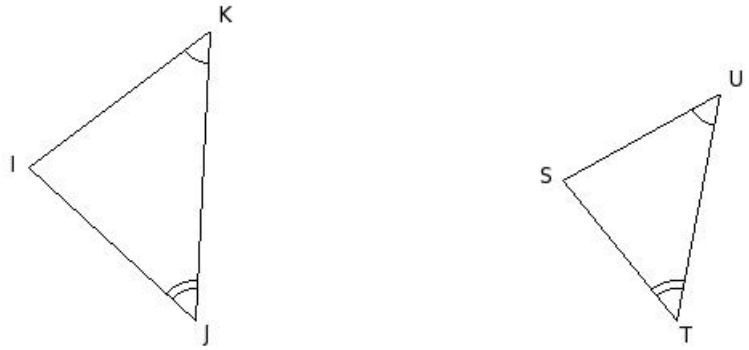
2. Identify the property by which the two given triangles are similar



(i) AAA Similarity
(ii) not similar
(iii) SAS Similarity
(iv) SSS Similarity

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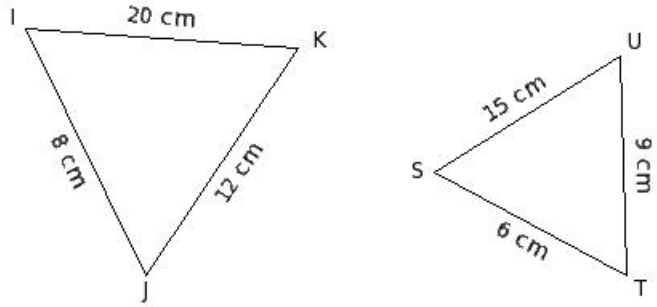
3. Identify the property by which the two given triangles are similar



(i) not similar
(ii) AAA Similarity
(iii) SAS Similarity
(iv) SSS Similarity

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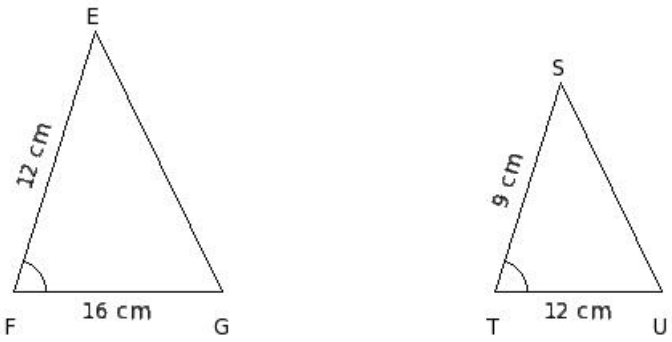
4. In the given figure, △EFG and △STU are such that

$\angle F = \angle T$ and $\frac{EF}{ST} = \frac{FG}{TU}$.

Identify the property by which the two triangles are similar



(i) SSS Similarity

(ii) AAA Similarity

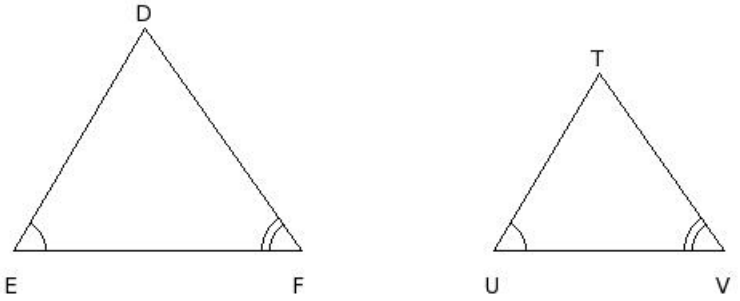
(iii) not similar

(iv) SAS Similarity

In the given figure, △DEF and △TUV are such that

5. $\angle E = \angle U$ and $\angle F = \angle V$.

Identify the property by which the two triangles are similar



(i) SSS Similarity

(ii) SAS Similarity

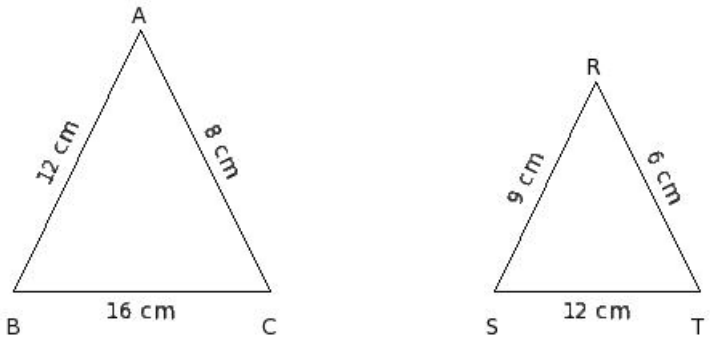
(iii) AAA Similarity

(iv) not similar

In the given figure, △ABC and △RST are such that

6. $\frac{AB}{RS} = \frac{BC}{ST} = \frac{CA}{TR}$.

Identify the property by which the two triangles are similar



(i) not similar

(ii) AAA Similarity

(iii) SAS Similarity

(iv) SSS Similarity

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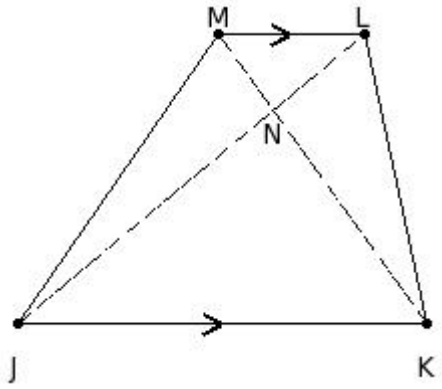
7. In the given figure, JKLM is a trapezium in which JK ‖ LM and the diagonals KM and JL intersect at N . △NLM ~



(i) △KLM (ii) △NKL (iii) △NMJ (iv) △MJK (v) △NJK

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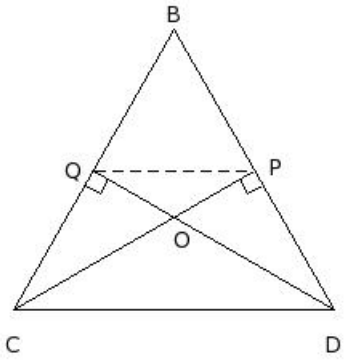
8. In the given figure, the altitudes PC and DQ of △BCD meet at O. △QCO ~



(i) △QCD (ii) △PDO (iii) △PDC (iv) △OQP (v) △OCD

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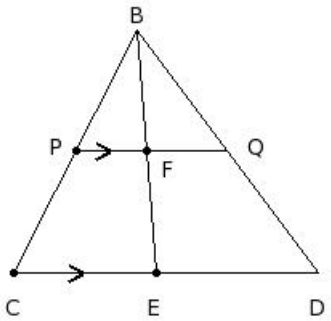
9. In the given figure, PQ ‖ CD , and median BE bisects PQ. △BPF ~



(i) △BCE (ii) △BED (iii) △BCD (iv) △CDB (v) △BFQ

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10. Which of the following are true ?

a) Any two circles are similar

b) Any two triangles are congruent

c) Any two triangles are similar

d) Any two circles are congruent

e) Any two squares are similar
f) Any two squares are congruent

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

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11. Which of the following are true ?

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

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

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12. Which of the following are true ?

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

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

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13. 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) 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 the sum of the individual area

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

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14. Which of the following are necessary conditions for similarity of two polygons ?

a) The corresponding sides are proportional
b) The corresponding angles are equal
c) The corresponding angles are proportional
d) The corresponding sides are equal

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

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15. Which of the following are true ?

a) Similarity is symmetric
b) Similarity is anti symmetric
c) Similarity is reflexive
d) Similarity is transitive

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

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16. Which of the following are true ?

a) Any two triangles are similar if the corresponding angles are equal
b) Any two quadrilaterals are similar if the corresponding angles are equal
c) Any two quadrilaterals are similar if the corresponding sides are proportional
d) Any two triangles are similar if the corresponding sides are proportional

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

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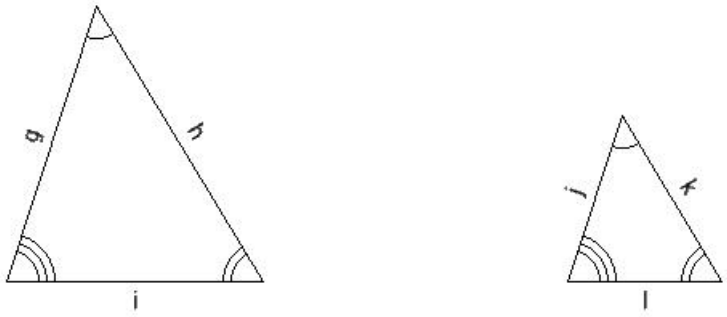
17. In the given two similar triangles, if g = 18 cm, h = 20 cm, i = 16 cm, l = 9.6 cm, find j



(i) 10.80 cm (ii) 8.80 cm (iii) 12.80 cm (iv) 11.80 cm (v) 9.80 cm

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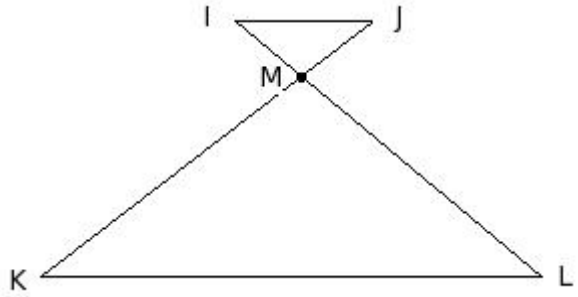
18. In the given figure, if IJ ‖ KL then



(i) △IJM ~ △MLK

(ii) △MIJ ~ △MKL

(iii) △IJM ~ △LKM

(iv) △IJM ~ △MKL

(v) △MJI ~ △MLK

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

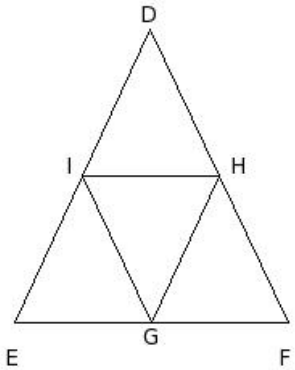
a) △HGF ~ △DEF

b) △IEG ~ △DEF

c) △DIH ~ △DEF

d) △GIH ~ △DEF

e) △GHI ~ △DEF



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

Assignment Key

1) (iii)
2) (i)
3) (iv)
4) (iv)
5) (iii)
6) (iv)
7) (v)
8) (ii)
9) (i)
10) (v)
11) (iii)
12) (iv)
13) (iv)
14) (iii)
15) (v)
16) (i)
17) (i)
18) (iii)
19) (v)